



GOVERNMENT OF INDIA  
TARIFF COMMISSION

**REPORT**  
**on the Continuance of Protection to the**  
**Piston Assembly (Pistons, Piston Rings**  
**and Gudgeon Pins) Industry**

**BOMBAY, 1963**

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**India Tariff (-----Commission)**

**Report on the Continuance of Protection  
to the Piston Assembly (Pistons, Piston  
Rings and Gudgeon Pins) Industry—  
1963.**



सत्यमेव जयते

## PERSONNEL OF THE COMMISSION

1. SHRI K. R. P. AIYANGAR . . . . . *Chairman*
2. SHRI J. N. SEN GUPTA . . . . . *Member*
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## SECRETARY

SHRI PRAMOD SINGH



GOVERNMENT OF INDIA  
MINISTRY OF INTERNATIONAL TRADE

*New Delhi, the 24th October, 1963.*

**RESOLUTION**

**Tariffs**

**No. 15(1)-Tar/63.**—The Tariff Commission has submitted its report on the continuance of protection to the piston Assembly (Pistons, Piston Rings and Gudgeon Pins) Industry on the basis of an enquiry undertaken by it under sections 11 (e) and 13 of the Tariff Commission Act, 1951. Its recommendations are as follows :—

- (1) Protection to the Piston Assembly Industry should be continued at the existing rate of duty for a further period of three years from 1st January, 1964 *i.e.*, upto 31st December, 1966.
- (2) In view of the rising targets of demand and the installation of capacities of new units before 1965-66 not being likely, expansion plans of established producers should be expedited and priority accorded to them for the release of foreign exchange as the raising of their capacity is quicker and would involve lesser additional cost and foreign exchange.
- (3) In order to remove the complaints of producers, the list of restricted categories of pistons (Appendix 26, Annexure A of the Red Book) should be revised so that indigenous industry may be helped and the import restrictions be relaxed where the small and special requirements of customers cannot be economically met by the indigenous producers.
- (4) Manufacturers of piston assembly, should be allowed every facility to obtain adequate and timely supply ~~of raw~~ materials, especially where some part of it is to be imported so as to reduce production costs. A tendency to mark-up prices of automobile spares at 70% or 100% over landed costs of imported products is not justified particularly when a higher rate of protective duty is taken as part of landed cost. Producers should not show any complacency in regard to their performance by comparing their current selling prices with such mark-up over landed cost including duty of imported products.
- (5) The authorities should consider the crase of this Industry favourably and ensure that its output does not fall on account of shortage of raw materials.
- (6) The companies should spare no pains to locate proper sand for their foundry and ensure the resulting economy.
- (7) As the producers are quality conscious the need to take effective steps to eliminate complaints has been impressed upon them.

(ii)

(8) Having regard to the scope of price reduction and the example of certain other protected industries which have made periodic price reduction, producers of this industry should also follow such example.

(9) Cost reduction being a continuous process, such producers as have not already introduced it, should maintain a proper system of cost accounting to assess both their financial and technical progress.

2. Government accept recommendation (1) above and the necessary legislation will be undertaken in due course.

3. Government have taken note of recommendations (2) to (5) above and steps will be taken to implement them as far as possible.

4. The attention of the piston assembly manufacturers and producers is drawn to recommendations (6) to (9).

#### ORDER

ORDERED that a copy of the resolution be communicated to all concerned and that it be published in the *Gazette of India*.

(Sd.) C. S. RAMACHANDRAN,  
*Joint Secretary to the Government of India.*

नमो भगवते वासुदेवाय

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## REPORT ON THE CONTINUANCE OF PROTECTION TO THE PISTON ASSEMBLY INDUSTRY

1.1. The piston assembly industry is an important ancillary of the automobile industry and the first unit in it was established in 1949 shortly after the pioneer automobile unit was set up. Our first inquiry into the claim of the piston assembly industry for protection was held in 1955, as a sequel to the suggestion in paragraph 12(c) of our report on protection to the automobile industry (1953) that the case of each automobile ancillary industry should be examined separately. Trunk piston assemblies being a general feature of internal combustion engines the inquiry covered non-vehicular engine piston assemblies as well. On our recommendation protection was granted to the piston assembly industry by levying a duty of 50 per cent *ad valorem* standard on trunk piston assemblies of 6" (153 mm.) diameter and below and piston rings (excluding chromium plated rings) and gudgeon pins required for such piston assemblies when imported separately. The preferential rate of duty was fixed at 42½ per cent *ad valorem* and protection was granted up to 31st December, 1957. We held the second and third inquiries into this industry in 1957 and 1960 and on both occasions recommended the continuance of protection. In 1957 we considered it was premature and not necessary to extend the scope to chromium plated rings and cylinder liners. But during the last inquiry the scope was extended to include chromium plated rings.

1.2. *Present inquiry.*—The period of protection is due to expire on 31st December, 1963. The present inquiry is therefore, undertaken under section 11 (e) read with Section 13 of the Tariff Commission Act, 1951 with a view to recommend any modifications, if necessary, in the existing scheme of protection.

2.1. In January 1963 detailed questionnaires were issued to the producers of piston assemblies and automobile and industrial engine manufacturers and their associations were asked to give their views on quality, prices and availability of indigenous products, etc. Importers were requested to furnish *c. i. f.* prices/*f. o. b.* quotations of imported pistons, etc. The aluminium manufacturers in the country were addressed to indicate the supply position of aluminium alloy to the piston assembly industry. The Department of Technical Development (D. T. D.) of the Ministry of Economic and Defence Co-ordination and the Development Commissioner, Small Scale Industries were requested to furnish detailed memoranda on the present position and problems of the industry in their respective sectors. Information regarding the progress made in formulating standard specifications for the products of the industry was sought from the Indian Standards Institution. The Collectors of customs at the ports of Bombay, Calcutta, Madras and Cochin were requested to furnish data regarding *c. i. f.* prices, landed costs, etc., of imported piston assemblies and their component parts. The D. G. S. & D.,

and the Ministry of Defence were requested to give their views on the supply position, quality and prices of indigenous products. Letters were issued to the State Governments to communicate their views in case they were interested in this inquiry. A press note was issued on 19-1-1963 inviting interested parties to forward to us their views. A list of firms and bodies to whom questionnaires/letters were issued and from whom replies or memoranda were received is given in Appendix I.

2.2. A list of factories visited by us and our officers in connection with this inquiry is given in Appendix II.

2.3. Shri S. R. Mallya, Assistant Cost Accounts Officer of the Commission was at the factories of India Pistons Ltd., Madras from 31st December, 1962 to 16th January, 1963 and those of Escorts Ltd., New Delhi and Goetze (India) Ltd., New Delhi from 6th to 16th February, 1963. He examined the cost of production of the protected items manufactured by these units.

2.4. The public inquiry into this industry was held on 24th April, 1963 followed by discussions on the next day with the representatives of the costed units. A list of persons who attended the inquiry is given in Appendix III.

3.1. The present scheme of protection covers (a) Trunk piston assemblies of diameter 153 mm. (6") and below, (b) Trunk pistons of diameter 153 mm. (6") and below, (c) Trunk piston rings including chromium plated rings of diameter 153 mm. (6") and below, and (d) gudgeon pins required for trunk pistons of diameter 153 mm. (6") and below, adapted for use as parts and accessories of internal combustion engines of all kinds, but excluding such articles as are adapted for use exclusively as parts and accessories of internal combustion engines of agricultural tractors and aeroplanes. At the time of the last inquiry in 1960 the industry repeated its request to include chromium plated rings in the scheme of protection on the grounds that it was then in a position to meet the domestic demand for such rings and also that exclusion of chromium plated rings from the scope of protection would lead to misuse of licences issued for the imports of items not manufactured in the country. We accepted this request and brought chromium plated rings within the scheme of protection. At that time, it was also represented to us that cast iron pistons and gudgeon pins should be excluded from the scope of protection but for reasons explained in our Report (1960) (paragraph 4.4), we did not find it necessary to change the scope of our inquiry.

3.2. In the present inquiry we have not received any representation for either extending or limiting its scope. As explained later, both India Pistons and Escorts have plans of producing trunk piston assemblies and components of over 153 mm. (6") and below 306 mm. (12") diameter. But at the public inquiry their representatives did not press for such piston assemblies to be included in the protected categories as their production will not commence for some time and will form a very



small part of the piston assembly output. At present these larger sizes are mainly for use on industrial or agricultural machinery and conveyances which carry either a low rate of duty or a duty-free concession and their premature inclusion may without benefiting the manufacturer be a source of hardship to the consumer. We have accordingly decided to make no change in the scope of the inquiry.

- 4.1 Our recommendations on matters other than the continuance of protection and the extent to which they have been implemented are indicated below :
4. Implementation of the Commission's recommendations in its last Report (1960).

- 4.2. "The Development Wing should ascertain from piston manufacturers the specifications and quality of pig iron required by them and should arrange with the Iron and Steel Controller to plan the requirements of the Industry and place allocations with those producers who can make pig iron according to the specifications of the piston manufacturers."

The Development Wing had, in 1960, addressed the units with a view to ascertain their requirements of pig iron and had also drawn the attention of the Iron and Steel Controller to this recommendation. The D. T. D. has now informed us that there is a general shortage of coke and pig iron and that the manufacturers are likely to feel its effects. In this connection, India Pistons Ltd. has stated that the supply of graded pig iron is extremely unsatisfactory and does not conform to the specifications required by it. Goetze (India) Ltd. has also complained that the supplies of pig iron are irregular and inadequate and not to the required specifications. The Iron and Steel Controller has indicated that all steel producers have been asked to step up output of pig iron and defence oriented industries will naturally get priority in allocation. An industry like piston assembly has a claim for similar treatment, but because of the small size of its demand it does not find a specific mention in the scheme of distribution. The matter is further discussed in paragraph 8.4 under "Raw Materials".

- 4.3. "It is reiterated that the domestic manufacturers of internal combustion engines of all types should finalise their arrangements for obtaining their requirements of piston assembly and components from indigenous sources. Further the import policy should be so framed as not to retard the implementation of the above recommendation."

It is understood from the manufacturers that nearly all the automobile and other internal combustion engine manufacturers have switched over to indigenous piston components for their original equipment. Only in case of a few manufacturers, such as, Indian National Diesel Engine Co. Ltd., Calcutta, Automobile Products of India Ltd., Bombay and Ruston and Hornsby (India) Ltd., Chinchvad, protracted negotiations are still going on with the indigenous manufacturers. In view of the fact that the indigenous products have been available over a number of years, we

would impress on the automobile manufacturers as another protected industry and also the other producers, to show an awareness of their obligation to help in the integrated development of the ancillary industry and accept indigenous products without much further ado. As regards the import policy, Government have progressively reduced the quota of piston assemblies for established importers from 100 per cent 'general' and 'soft' fixed for the licensing period April-September 1960 to 16-2/3 per cent for April 1963—March 1964 licensing period and that of piston rings from 50 per cent 'general' and 'soft' to 3-1/8 per cent during the above period. Protected categories of piston assembly and component parts were subjected to face value restrictions within the stipulated quotas. The import policies since the last inquiry is discussed in detail in paragraph 10.1.

- 4.4. "The units which have entered into foreign collaboration should take steps to get the restrictive provisions regarding exports suitably modified in their own interests as well as for the development of export trade".

India Pistons Ltd. has obtained world-export rights from its foreign associates, Associated Engineering Holdings Ltd., U. K. It is however, precluded from using the trade mark, certification marks and other identification marks of A. E. H. and its subsidiary companies in respect of any of the products exported from India. The agreement however provides for marking the products as manufactured under licence of its collaborators. The other condition laid down by the British Firms is that the prices charged by the Indian company for products sold for exports should not be lower than those charged by A. E. H. and its subsidiary companies in foreign markets. The technical collaboration agreement of Escorts Ltd. with Mahle Komm-Ges, West Germany also permits the Indian company to export its products without the trade mark of its associates. Goetze (India) Ltd. has informed that its agreement with Goetzerwerke Friedrich Goetze A. G., West Germany, entitles it to export to neighbouring countries, namely, Nepal, Ceylon, Burma, Malaya and Indonesia. Representatives of these units mentioned to us in the course of discussion that exports without brand names will not be subject to any territory restrictions and they will be seeking permission for extending export rights with trade mark after the company's expansion plans are implemented.

- 4.5. "The indigenous aluminium industry, if it could not augment its supply of aluminium alloy ingots, should not at least reduce the supplies to piston manufacturers below the existing levels."

The Aluminium Corporation of India Ltd., in deference to our recommendation has been supplying aluminium alloy to India Pistons Ltd. The latter unit has now switched over wholly to indigenous alloy ingots. Escorts has stated that it had approached the main producers of aluminium in the country who have expressed so far their inability to supply aluminium alloy to required specifications. Details regarding aluminium supplies to the industry are described in paragraphs 8.2.1 and 8.2.2.

5.1. At the time of the last inquiry in 1960, there were two major units in production, namely, India Pistons Ltd., Madras and Goetze (India) Private Ltd., New Delhi. Escorts (Agents) Private Ltd., New Delhi had a licence to manufacture pistons. Hindustan Motors, Calcutta, was stated to be meeting its own requirements of pistons and pins. At present all these four units are in production. A number of units in the small scale sector are reported by the Development Commissioner, Small Scale Industries. The D.T.D. has reported that two new units, namely, Niranjana Auto Pistons Ltd., New Delhi and Nathani Industries Private Ltd., Bombay have been granted licences to manufacture component parts of piston assembly.

5.1.1. *India Pistons Ltd., Madras.*—The company was registered at Madras in July 1949 with authorised and paid-up capital of Rs. 25 lakhs. Its authorised capital was raised to Rs. 30 lakhs in 1957 and Rs. 100 lakhs in 1962. Though now having an original block value of about Rs. 125 lakhs the paid-up capital has remained at the figure of Rs. 25 lakhs, of which the holding company, Simpson and Co. Ltd., owns over eighty per cent. It has a technical collaboration agreement for 20 years with Associated Engineering Holdings Ltd., a U. K. group comprising wellknown piston manufacturers like Wellworthy, Hepworth, Bricovmo, etc. The British firm has to provide, against a royalty fee, technical know-how for the manufacture of pistons, piston rings, gudgeon pins and certain other components of internal combustion engines not covered by the scope of protection in the present inquiry, such as centrifugal pot castings, cylinder liners, piston and liner castings, tappets, valve guides and valve seats. Since its inception in 1949 the company has made continuous and steady progress in all directions. It started manufacturing piston rings in 1950, pistons in 1952, gudgeon pins in 1954, Dauflex piston rings (steel section rings) in 1955 and chromium plated rings in 1959. It established its own cast iron foundry in 1951, its aluminium foundry in 1957, and commenced manufacturing forging mainly for pistons for Tata Mercedes-Benz in 1962. The company has stated that its capacity for castings and forgings is sufficient not only to meet its own requirements but also to cater to the demand of outside customers. It completed its first expansion at a cost of Rs. 58.17 lakhs during 1961 doubling its capacity for pistons from 300,000 to 600,000 per annum and substantially increasing its capacity for components, such as rings and gudgeon pins. It has now embarked upon a second expansion scheme costing over Rs. 150 lakhs to be implemented in two phases with the aid of its foreign collaborator. The first phase will cover expansion for the production of pistons of diameter 153 mm. (6") and below and components including circlips and the second phase will cover pistons from 153 mm. (6") to 306 mm. (12") diameter. With the completion of the project for making circlips in 1963 the company claims that it would be manufacturing all the components of piston assembly. The second phase of the expansion also includes establishing a research and development unit which it claims will be the first of its kind in the Indian automobile ancillary industry. Their sales which were about Rs. 74 lakhs in 1958-59 have nearly doubled and the profits

before taxation and reserves and surpluses have risen from Rs. 10.9 lakhs and Rs. 16.1 lakhs in 1958-59 to Rs. 26.0 lakhs and Rs. 36.1 lakhs respectively in 1961-62. The rate of dividend which has ranged during this period from 12 per cent to 24 per cent is said to be large only on account of under 'capitalisation', its low share capital being presumably made possible by its position in the Group to which it belongs. The number of workers employed by the company has risen from 1,031 in 1960 to 1,273 in 1961 and 1,421 in 1962.

5.1.2. *Escorts Ltd., New Delhi.*—The company was converted into a public limited company in December 1959 under its present name with an authorised capital of Rs. 200 lakhs of which about half were preference shares and the paid-up capital was Rs. 47 lakhs. Its authorised capital as at the end of December 1961 stood at Rs. 300 lakhs and its paid-up capital at Rs. 88 lakhs. In 1960 it held a licence to manufacture 3 lakh pistons on double shift at its factory to be established at Bahadurgarh (Punjab). It has a ten year collaboration agreement with Mahle Komm-Ges, West Germany, who have also financial interest. The technical agreement which allows a royalty fee provides for the supply of special purpose machinery, drawings, technical know-how, the use of its trade mark MAHLE, training of Indian engineers and arranging inspection of indigenous products in their laboratory. Escorts which commenced production of pistons in 1960, has its own foundry for castings and has also installed a forging plant. The value of its original block was Rs. 44 lakhs for this purpose. It employed on an average 45, 81 and 146 workers in 1960, 1961 and 1962 respectively in its piston factory. In 1962 the company was granted a licence for the manufacture of 660,000 pistons pins (gudgeon pins) per annum but has not got its licence for import of capital goods. It has received a letter of intent from Government allowing it to double its capacity for pistons upto 153 mm. diameter and for 150,000 pistons above this size. The company has several other activities such as production of agricultural machinery, motorcycle scooters, razor blades, railway shock absorbers, etc., at other factories. As Escorts Ltd. is a composite unit, its financial results cannot be directly compared to that of the other producer.

5.1.3. *Goetze (India) Ltd., New Delhi.*—This company, a subsidiary of Escorts Ltd., has its factory at Bahadurgarh near Patiala. Its authorised capital is Rs. 65 lakhs and paid-up capital Rs. 29 lakhs of which over 52 per cent is owned by the holding company, Escorts Ltd. It is licensed to manufacture piston rings and sleeves. Their production commenced in July 1957 and October, 1962 respectively. Its present block (original value) is Rs. 60 lakhs. Its 20-year technical collaboration agreement with Goetzerwerke Friedrich Goetze A.G., West Germany, provides for the supply of latest machinery and equipment, loaning of engineers, training of Indian personnel and arranging for testing of indigenous products. The German firm has a share holding interest in the company and receives a royalty on net sales value of piston rings and sleeves. The company has received a letter of intent from Government agreeing to its plans to double its capacity of piston rings. The

average number of workers employed by the company during 1960, 1961 and 1962 was 244, 264 and 266 respectively. Its financial results indicate a rise in sales realisation from Rs. 26.7 lakhs in 1959 to Rs. 33 lakhs in 1961 and in the latter year it declared 10 per cent dividend on equity shares and 7 per cent, tax free, on preference shares. Being under an obligation to sell all its products (other than sales of original equipment) to its holding company, Escorts as its sole distributor, its real profit cannot be accurately assessed.

5.1.4. *Hindustan Motors Ltd., Calcutta.*—This automobile manufacturer machines pistons from indigenous castings for its own use. The castings are reported to be procured, after being rough turned from India Pistons. Rings are obtained from other manufacturers like Goetze but the company makes its own gudgeon pins. Pistons produced are only for Ambassador cars, about 40,000 being absorbed as original equipment and the surplus sold in the replacement market. The company failed to furnish its cost of production of piston assembly on a basis comparable with other producers. We have been advised that its existing plant for the manufacture of pistons is hardly suited to ensure either the possible economies of size or the required quality standards. In the context of the agreed policy which has been endorsed by experts that piston assembly and components should be earmarked for specialised development by ancillary units no expansion of its activities is envisaged.

5.1.5. Besides these units, some of the engineering companies like Textool Company Ltd., Coimbatore, Laxmiratan Engineering Works Ltd., Faridabad and Kulko Engineering Works, Kolhapur, have informed that they manufacture piston assemblies and their component parts for their own use on stationary engines. Details regarding these units are not available.

5.1.6. *Niranjan Auto Pistons Ltd., New Delhi.*—The unit has been granted a licence in July 1960 to manufacture 300,000 Pistons of sizes upto 153 mm., 1,500,000 Piston rings and 300,000 Gudgeon Pins. The factory is to be located in U. P. The unit is making arrangements with a West German Firm Messrs. Karl Schmidt for manufacturing Pistons and Gudgeon Pins and a Swiss Firm, Establishments Sim, for the manufacture of Piston rings. Its capital goods licence having still to be obtained, it is not expected to commence production till 1965.

5.1.7. *Nathani Industries Private Ltd., Bombay.*—A manufacturing licence has been granted to this unit in April 1962 for producing Gudgeon pins at a plant to be located in Maharashtra. The capacity of the unit and the likely date of commencement of production are not known, but in any case the unit, if started, is not likely to be in production before 1965.

5.2. *The Small Scale Sector.*—The Development Commissioner, Small Scale Industries, has reported that there are 79 Small Scale units manufacturing Piston assemblies, Pistons, Piston rings and Gudgeon

pins. The names of these units and the items manufactured by each are given in Appendix IV. In our last report we had referred to two such units namely Hindustan Pistons Private Ltd., Madras and Auto Piston Manufacturing Co., Amritsar, which produce a variety of Pistons and Pins. We understand that La-Prenca Industries Private Ltd., Bombay, also manufacture pistons mainly for stationary Engines which it supplies as original equipment to Engine and Compressor manufacturers. The total capital invested by the Small Scale Sector is said to be Rs. 9,041,000 and the labour employed by it is stated to be 1,332. The Small Scale Sector generally suffers from lack of quality control instruments and inspection techniques. Precision instruments are not readily available to it in the market at reasonable prices. Some of the units do not have proper tempering arrangements. The Development Commissioner is of the opinion that the quality of output needs to be improved. The products of the Small Scale Sector are traded in mostly through dealers. Some stationary Oil Engine manufacturers purchase directly from these units. Technical advice as well as marketing assistance is rendered by the National Small Industries Corporation.

### 6.1. Capacity :

6.1.1. In 1960, the capacity of the units in the organised Sector for the protected items on single shift was 358,000 pistons, 3,780,000 piston rings and 418,000 gudgeon pins. Of these, India Pistons Ltd. accounted for 300,000 pistons, 2,280,000 piston rings and 360,000 gudgeon pins and Goetz (India) Ltd. for 1,500,000 piston rings.

6.1.2. Substantial expansion has been licensed for two producers and two new units have been granted licences. As pointed out earlier it does not seem likely that the two new units will add to the installed capacity before 1965-66. In view of the rising targets of demand indicated in paragraph 7.5 shortages might, therefore, develop if the expansion plans of the established producers are not expedited and priority accorded to them for the release of foreign exchange required. We consider that necessary facilities as above should be allowed as the raising of their capacity is quicker and would involve lesser additional cost and foreign exchange. The present installed capacity on the basis of maximum utilisation of plant and machinery along with the licensed capacity on full expansion, production during 1962, indicating the extent to which installed capacity is realised and the number of shift worked are indicated in page 9.

### 6.2 Production :

6.2.1. Production of pistons, piston rings and gudgeon pins during the years 1960, 1961 and 1962 as furnished by the units is given in the statement in page 10. Production of the Small Scale Sector as furnished by the Development Commissioner is also indicated in the statement.

Name of the Unit	PISTONS			PISTON RINGS			GUDGEON PINS		
	Capacity		Production during 1962	Capacity		Production during 1962	Capacity		Production during 1962
	Present	Expansion		Present	Expansion		Present	Expansion	
India Pistons	0.600	1.500	0.409 (2)	3.600	9.000	4.920 (2)	0.600	1.650	0.420 (2)
Escorts Ltd.	0.300	0.720	0.214 (2)	..	..	..	..	0.660	..
Goetze (India) Ltd.	..	..	..	3.000	6.000	3.637 (3)	..	..	..
Hindustan Motors	0.077*	0.070	0.056†	..	..	..	..	..	..
Niranjan Auto Pistons	..	0.300	..	..	1.500	..	..	0.300	..
Nathani Industries	..	..	..	..	..	..	Not fixed	..	..
TOTAL	0.977	2.590	0.679	6.600	16.500	8.557	0.600	2.610	0.420
Small scale sector	0.460	..	0.165	2.210	..	0.215	1.190	..	0.420

\*Capacity as reported by the unit in its monthly returns. The same is assumed as maximum utilisation of plant and machinery.

† Data for three months were not available. The figure, therefore, represents estimate for the year.

Figures in brackets indicate the number of shifts worked by the units in 1962.

*Statement showing production of pistons, piston rings and gudgeon pins during the years 1960 to 1962*

(In numbers)

Name of the Units	Pistons			Pistons Rings			Gudgeon Pins			
	1960	1961	1962	1960	1961	1962	1960	1961	1962	
1. India Pistons Ltd.	.	257,698	354,045	409,351	3,222,494	4,458,274	4,919,683	265,079	354,303	420,029
2. Escorts Ltd.	.	63,871	126,014	213,806	..	..	..	..	..	..
3. Goetze (India) Ltd.	.	..	..	..	3,162,883	3,092,786	3,637,204	..	..	..
4. Hindustan Motors Ltd.	.	N. A.	42,235	55,886*	..	..	..	..	..	..
TOTAL	.	321,569	522,294	679,043	6,385,377	7,551,060	8,556,887	265,079	354,303	420,029
Small scale sector	.	129,392	172,930	165,149	339,624	484,093	214,644	80,682	121,405	419,685

\*Data for 3 months were not available. The figure, therefore, represents estimate for the year.



7.1. In our last Report (1960), we estimated the total demand for original equipment and replacement for pistons, piston rings and gudgeon pins as 1.090 million pistons, 7.466 million piston rings and 1.090 million gudgeon pins. As regards future demand, it was envisaged that there would be an increase of 10 per cent per year in the total requirement.

On that basis, the total demand for 1963 would amount to 1.452 million pistons, 9.938 million piston rings and 1.452 million gudgeon pins. These estimates were exclusive of the requirement of the Defence Services. The estimates were based on the class-wise cylinder composition of vehicular and industrial engines in operation at that time and additions thereto from year to year. For replacements, estimates of life at the following rates which took note of mileage covered were adopted after discussion at the public inquiry. This worked out as below in respect of piston assemblies :

(i) Private motor cars, motor cabs and jeeps	Once in 5 years
(ii) Public service vehicles, goods vehicles and miscellaneous vehicles	3 "
(iii) Motor cycles and auto-rickshaws	3 "
(iv) Tractors	5 "
(v) Stationary engines	5 "

It was also assumed that the number of rings required for original equipment was four for each piston and twice that number for replacement, as occasions for replacement of rings would be twice as many as for pistons.

7.2. The estimates of demand for piston assemblies and piston rings at the end of 1965-66 as assessed by the Development Council for Automobiles, Automobile Ancillary and Transport Industries are given below :

(In numbers)						
Item	Cars and Jeeps	Commercial vehicles		Motor cycles scooters and 3 wheelers	Industrial engines	Total
		Petrol	Diesel			
<i>Piston Assembly—</i>						
Original equipment .	200,000	60,000	300,000	50,000	160,000	770,000
Replacement . . .	360,000	60,000	800,000	22,800	212,500	1,455,300
<i>Piston Rings—</i>						
Replacement . . .	720,000	100,000	1,600,000	152,000	425,000	2,997,000

7.3.1. The Number of vehicles on road at the end of 1962 according to figures furnished by the Ministry of Transport and Communications and the estimated Number as assumed by the Development Council by 1965-66 are given below. The estimate of vehicles on the road as 2—7 T. C. Bom/63

on 31st March 1963 given by the Association of the Automobile Manufacturers is also indicated :

	Ministry of Transport and Communications estimate for 1962	Association of Automobile Manufacturers' estimate as on 31-3-1963	Development Councils' esti- mate for 1965- 1966
(a) Cars, cabs, and jeeps	318,400	365,520	450,000
(b) Commercial vehicles :			
Petrol	86,800		25,000
Diesel	142,400		400,000
TOTAL	229,200	269,886	425,000
(c) Miscellaneous vehicles in- cluding tractors, road rollers etc.			
Petrol	15,000		
Diesel	17,700		
TOTAL	32,700	43,144	90,000
(d) Motor cycles, rickshaws, etc.	100,900	143,796	228,000
(e) Stationary engines with single cylinder	..	..	600,000

The estimate of demand by the Development Council was formulated early in 1961 when the automobile industry was more optimistic than today of achieving its targets. Due to higher Number of vehicles and engines assumed in service in 1965-66 the estimates of demand formulated by it would prove to be on the high side and need to be scaled down for pistons.

7.3.2. The D. T. D. has stated that its own estimate of demand for pistons and for piston rings for piston assemblies and for replacement by 1965-66 is 2,225,300 and 13,291,000 respectively and the demand for gudgeon pins for the above piston assemblies is 2,436,830. It has suggested that the demand for 1963-64 may be taken as 20 per cent less and that of 1964-65 at 10 per cent less than the above demand assessed by the Development Council and D. T. D. The D. T. D's estimates worked on the above basis are given along with the estimates of India Pistons which is also made on a carefully calculated basis on page 16.

7.4. *Apparent consumption.*—Data regarding the imports of piston assembly, pistons, piston rings and gudgeon pins are available for 1960, 1961 and 1962. Based on these import data and the data relating to the sales of domestic products, their aggregate which is the apparent consumption of pistons, piston rings and gudgeon pins has been as under :

(In numbers)

	1960	1961	1962
<i>Pistons—</i>			
Sales . . . . .	321,124	482,899	621,007
Imports . . . . .	256,467	272,381	154,266
Apparent consumption . . . . .	577,591	755,280	775,273
<i>Piston Rings—</i>			
Sales . . . . .	6,179,712	7,167,255	8,800,607
Imports . . . . .	971,670	888,605	1,164,940
Apparent consumption . . . . .	7,151,382	8,055,860	9,965,547
<i>Gudgeon Pins—</i>			
Sales . . . . .	258,298	326,247	398,424
Imports . . . . .	340,505	201,475	199,460
Apparent consumption . . . . .	598,803	527,722	597,884

Compared to the estimates of demand for 1963-64 prepared by the D. T. D. and for 1963 by the producer, the above figures of apparent consumption of pistons are very low even if part of the requirements were met by the small scale sector and an element of unsatisfied demand exists.

7.5. In view of the wide divergence of estimates we discussed the basis of demand at the public inquiry. It was considered that the estimates for 1965-66 made by Development Council in 1961 would be somewhat unrealistic now due to the slowing down of development in the automobile industry and the inhibiting effects of various fiscal factors in this regard. Despite the stepping up of demand for defence requirements, a part of which would be met by a shift from civilian consumption, the scale of increase originally envisaged cannot be reached. The representative of D. T. D. also agreed that the targets for 1965-66 may in the circumstances hold good only for 1966 or beyond. He also stated that his present estimates for 1964 and 1965 were merely worked down from the 1966 target. India Pistons also pointed out that its market surveys showed that its own estimates for re-ringing was rather optimistic. Taking into account all the basic factors as assumed by the Development Council and the producers it was agreed that the estimates of demand, present and for future should be scaled down. After discussion at the public inquiry the following estimates of demand were considered reasonable :

	(In Millions)	
	1963	1965
Pistons . . . . .	1.5	2.0
Piston rings . . . . .	10.5	14.0
Gudgeon pins . . . . .	1.6	2.2

The figures for 1964 may be taken as the median. These estimates are also incorporated for the sake of comparison in the statement given below :

*Estimates of Demand Furnished by D.T.D., India Pistons Ltd. and Commission's Estimate*

	D. T. D.			India Pistons Ltd.			Commission's estimate determined after discussion			
	Original Equipment	Replacement	Total	Original Equipment	Replacement	Total				
1963										
Pistons	.	.	.	616,000	1,156,240	1,772,840	412,000	1,057,000	1,469,000	1,500,000
Rings	.	.	.	..	..	10,632,200	..	..	12,626,000	10,500,000
Gudgeon Pins	.	.	.	..	..	1,949,464	412,000	1,057,000	1,469,000	1,600,000
1964										
Pistons	.	.	.	693,000	1,300,770	1,993,770	541,000	1,129,000	1,670,000	..
Rings	.	.	.	..	..	11,961,900	..	..	13,997,000	..
Gudgeon Pins	.	.	.	..	..	2,193,147	541,000	1,129,000	1,670,000	..
1965										
Pistons	.	.	.	770,000	1,455,300	2,225,300	673,000	1,238,000	1,911,000	2,000,000
Rings	.	.	.	..	..	13,291,000	..	..	15,867,000	14,000,000
Gudgeon Pins	.	.	.	..	..	2,436,830	673,000	1,238,000	1,911,000	2,200,000

NOTES.—(1) Figures for D. T. D. relate to 1963-64, 1964-1965 and 1965-66 respectively. Estimates for 1963-64 and 1964-65 are worked out on the basis of the method suggested by the D. T. D. viz., at 20 per cent and 10 per cent less respectively than the estimate for 1965-66. The D. T. D. did not furnish any estimate of the demand for piston assemblies. It is presumed that it agrees with the estimate of Development Council, i. e. 2,225,300 for original equipment and replacement and hence that estimate is included in the above table, and the estimates for 1963-64 and 1964-65 are calculated on that basis. D. T. D.'s estimates for pistons have been taken to be same as that for piston assembly.

(2) India Pistons' estimate of pistons does not include the demand for pistons for compressors and refrigerators (153mm. upto 6"). Although India Pistons did not give any estimate for pins, since each piston requires one pin, the estimate of demand for pistons is repeated against gudgeon pins also.

8.1. Aluminium alloy for pistons, special steel for gudgeon pins and expander rings and pig iron and ferro-alloys for piston rings are the principal raw materials required by the manufacturers of piston assemblies. In raw material cost for pistons aluminium forms largest element.

**8. Raw materials** The cost of aluminium casting (and forging in case of pistons for T.M.B. engines) during the actual costed period as a percentage of the ex-works cost of piston assembly was found to vary from about 23 to 39 per cent in case of India Pistons and about 35 to 41 per cent in case of Escorts for comparable piston assemblies. The disparity appears to be due to the use of imported castings by the latter which were costlier. We were informed that the price of alloys f. o. b. was higher only by £ 20 per ton or roughly 10 per cent over that of virgin metal so that the above percentage will be only slightly reduced for aluminium costs. Indigenous aluminium of commercial grade is however still higher priced and affects the alloy costs. With India Pistons switching over completely to more expensive indigenous aluminium alloy and Escorts commissioning its own foundry and also making use of indigenous aluminium, the divergence may be expected to narrow down in future. The position regarding indigenous availability of aluminium needs more detailed examination.

8.2.1. Apart from higher cost, availability is also a problem. The indigenous production of aluminium ingots which was about 18,400 tonnes for the year 1961 has risen to a rate of over 50,000 tonnes per year at the end of 1962 with the commissioning of 20,000 tonnes/year smelter at Renukoot by Hindustan Aluminium Ltd., 10,000 tonnes/year smelter by Indian Aluminium Company at Hirakud and completion of expansion by 5,000 tonnes/year smelter by Aluminium Corporation of India. The piston assembly industry needs less than 1,000 tonnes per year now to make special alloys from aluminium ingots of commercial grade. During 1962 both India Pistons and Escorts have imported aluminium alloy to the extent of 75 and 93 per cent of their respective requirements. The total quantity purchased by India Pistons was 414 tons and that by Escorts 98 tons in 1962. India Pistons has informed that indigenous aluminium ingots are priced about Rs. 1135 per ton higher than imported aluminium. It has stated that it is now procuring aluminium from indigenous sources in spite of higher prices and with this switch over 97 per cent of the cost of piston assembly will form indigenous content. Escorts has reported that it approached all the three main producers of aluminium but they expressed inability to supply aluminium alloy to its specifications, though technically they are in a position to meet the specifications of the alloys required by the industry. Aluminium Corporation of India has been supplying eutectic alloys of aluminium (LM13) for the last two to three years to India Pistons with slight adjustment in composition to suit India Pistons. At the present stage it may have some difficulty with the problem of 'freezing of metal' for hypereutectic alloys but, with installation of its induction furnace by the end of the year or with the import of silicon aluminium hardener containing higher percentage of silicon it hopes to overcome the difficulty. Its representative as well

as that of Hindustan Aluminium present at the inquiry expressed their Company's readiness to supply aluminium alloy to this industry. Indian Aluminium Co. had supplied in 1962, 54 tonnes of commercial grade aluminium ingots to Eyre Smelting (Private) Ltd., Madras on account of India Pistons. Escorts has reported that it is also trying to find out whether Eyre Smelting which has submitted samples can meet its requirements. By the end of this year it expects to instal an electric induction furnace when it would be in a position to make its own alloys. However, even in the meantime when its plant capacity is greatly under-utilised due to shortage of aluminium alloy it should obtain at least its requirement of eutectic alloy indigenously since facilities for such alloy making have been established and are already being made use of by the other producers. With the bulk of its requirement thus procured indigenously there will be a saving of foreign exchange and an improvement in its plant utilisation. With necessary efforts it may be possible for it to persuade one of the producers to supply to it even the hypereutectic alloys of required specifications and in sufficient quantities.

8.2.2. The problem of supply of aluminium to this protected industry has to be tackled on a rational basis. Though the requirements of the industry are relatively small, with the development of indigenous aluminium industry it seems injudicious to let this important ancillary industry depend on imports and use up foreign exchange unnecessarily. We consider that some priority should be given to industrial users of aluminium after meeting demands for conductor grade aluminium and in preference to consumers of sheets and circles for the domestic utensil industry. Again for the proper development of industry, indigenous production of aluminium alloys should be encouraged. A further factor to be borne in mind is that the prices of domestic virgin metal of commercial quality are high in relation to imports. Supply should therefore be ensured to industrial users at reasonable prices by the aluminium producers.

8.3. Pistons are made either from castings or, as in the case of pistons for Tata Mercedes-Benz from forgings of aluminium alloy. India Pistons and Escorts have set up their own aluminium foundries. The capacity of the former is 600,000 castings and the latter's capacity is 360,000 castings on double shift. India Pistons and Escorts have also installed forging plants with capacities of 150,000 forgings (presumably on 2 shift basis) and 240,000 forgings (120,000 forgings on single shift) respectively. The production of castings by these two firms was as under:—

	1960	1961	1962
India Pistons . . . . .	405,000	470,000	473,000
Escorts . . . . .	..	..	147,000

While Escorts has stated that its capacity for castings and forgings is enough to meet its present requirements it cannot meet the expansion requirements, India Pistons has informed that its castings and forging

capacity cannot only meet its requirements fully but is also in a position to supply to outside customers.

8.4. Pig iron required for the manufacture of piston rings is being procured from indigenous sources completely. The producers have complained that they are unable to get their full requirements though in the overall context of important industries the quantity indented by them is small. They have also complained that the supply of graded pig iron is extremely unsatisfactory and on chemical analysis does not conform to specifications prescribed for silicon, manganese or phosphorous. Since pig iron of its specifications is not readily available, India Pistons, says, it is purchasing from Hindustan Steel grade LM-2 and LM-4 with higher manganese content resulting in costly experiments, high scrap loss and necessitating import of ferro-alloys. Since the demand for pig iron is now much in excess of availability, the Iron and Steel Controller has laid down, a scheme of priorities in distribution. Although as an ancillary of the automobile industry which is defence-oriented now, the piston assembly industry should get requisite priority, we observe that there is no adequate provision for industries having such a small demand. We recommend that the authorities should consider the case of this industry favourably and ensure that its output does not fall on account of shortage of raw materials.

8.5. Goetze manufactures rings exclusively from individual castings and India Pistons also plans to increase its share of individual cast rings. The more important factor in rejection of rings is stated to be not the quality of pig iron as much as the unsatisfactory quality of sand, particularly its grain size and clay content. As against the centrifugally cast rings while claims have been made on merits for individual cast rings and we were told the AEH units collaborating with India Pistons, were themselves divided in their preference, it would appear the latter method has better scope of cost reduction for large repeat orders. In the circumstances we would urge that the companies should spare no pains to locate proper sand for their foundry and ensure the resulting economy which could also benefit the consumer in the long run.

8.6. Special alloy steels for gudgeon pins and steel section rings are presently imported. Though the value of such imports is small, India Pistons has stated that it is in close touch with the steel manufacturers and hopes to locate indigenous sources for the supply of these steels within a few years, thus making the industry independent of foreign sources of supply.

#### 9.1. *Quality:*

9.1.1. Consumers generally and importers who have replied to our questionnaire have expressed satisfaction regarding the quality of the domestic products. Since the indigenous units are all working in collaboration with well-known foreign manufacturers, and as no complaints have been received, their products are considered by the D. T. D. to be generally satisfactory, a view also shared by the D. G. S. & D., and other Government agencies.

9.1.2. Some consumers have none the less enumerated the defects noticed by them in piston assemblies of indigenous manufacture. These relate to dimensional inaccuracies such as mismatching and defective fits of gudgeon pins and wrong sizes of grooves and to material defects such as blow holes, soft material, high core hardness of gudgeon pin and other physical defects. The consumers have, however, without exception stated that when a defect was brought to the notice of the manufacturer/supplier, the matter was promptly and satisfactorily attended to by him. In this connection, producers have claimed that the quality of their products is comparable with any international standard, that the nature and number of complaints received against the total supplies effected is quite negligible and need not be a reflection on their ability to supply a satisfactory product and each complaint received is attended to and thoroughly investigated. Some of the complaints were also said to be due to damage in transit or improper assembling. Considered in relation to volume of sales the quantum of defectives reported was extremely small. As the producers are quality conscious we have impressed upon them the need to take effective steps to eliminate complaints.

9.1.3. India Pistons, Escorts and Goetze have stated that they maintain an up-to-date and modern laboratory for metallurgical and chemical analysis and that reports of such analyses are also furnished to manufacturers for their examination and record. Statistical quality control measures have been introduced and at every stage of production the products are inspected for material defects and dimensional inaccuracies physically and with special instruments and measuring devices. The final inspection reports are furnished to the manufacturers for comparison with their specifications for their examination. India Pistons Ltd. has stated that it is also working in close liaison with the Indian Institute of Science at Bangalore for functional tests where considered necessary for development of New products or for proving new designs. It has plans to establish, under its second expansion programme, a research and development unit.

## 9.2. *Standard Specifications :*

9.2.1. At the time of the last inquiry there were no standard specifications in existence in respect of piston assemblies or their Components. The automobile manufacturers as well as the manufacturers of piston assemblies felt that the industry was in no way handicapped by the absence of I. S. I. standards for rings, etc. The former did not evince interest in the formulation of standards as most of the automobile engines were assembled or manufactured in collaboration with overseas manufacturers. They had, therefore, to conform to the design and specifications of the collaborators. It was further felt that as the number of designs of pistons and rings to match engine designs were so numerous, an elaborate or comprehensive standard might not prove feasible. A draft BS specification sought to standardise piston assembly parts only to ensure greater inter-changeability of associated components like gudgeon pins, rings and circlips. In the light of the



above, we had in the last Report (1960) expressed the view that our earlier recommendation regarding the formulation of standards did not require to be further pursued except to the limited extent indicated above. The position does not seem to have changed since then.

9.2.2. We are now informed by the Indian Standards Institution that the subject of pistons and piston assemblies has been under consideration of the Internal Combustion Engines Sectional Committee of the Institution for quite some time, but no progress has been made due to lack of agreement on the principles to be followed in preparing the standards. A draft I. S. S. for piston rings covering piston rings for automotive purposes up to 200 mm. diameter, including chromium plated rings has been revised and is to be discussed further. The draft on gudgeon pins is in a preliminary state and cast iron and aluminium alloy pistons are on the Institution's programme of work but the standardisation of piston assemblies is not likely to be taken up.

#### 10.1. *Import Control Policy :*

10.1.1. The import policy relating to piston assembly and components is set out in List III of Appendix XXVI of the Import Trade Control Policy issued by the Ministry of Commerce and Industry, from time to time. The policy in respect of the protected items, pursued by the Government since the licensing period April-September 1960 is given in Appendix V.

10.1.2. At the time of the last inquiry we had recommended that the import policy should be so framed as not to retard the implementation of this policy, that domestic manufacturers of internal combustion engines of all types should obtain their requirements from indigenous sources only. Accordingly the import quota in respect of piston assemblies and piston rings has been progressively reduced since 1960. However, the main producers have pointed out certain lacuna in the import control policy. They have stated that neither the protective duty imposed nor the restriction on imports have been able to effectively check import of protected items. Certain piston rings of the types produced indigenously now are being allowed to be imported as original equipment with pistons and engines in c. k. d. condition. The piston imports which are restricted cover those types applicable to models, a majority of which are off the road and for which there is little or no demand, e. g., chevrolet, Austin, Hillman, etc. At the same time there are no restrictions on import of pistons used for popular models like Tata-Benz, Leyland trucks, Ambassador cars, Lambretta and Vespa scooters, Tempo three-wheelers, etc. for which there exists a great demand and which can be met from indigenous production. On examination of the restricted categories (as per appendix 26, Annexure A of the Red Book) we find the producers' contention more or less correct. One producer has, therefore, requested for a total ban of imports of types of pistons and rings currently manufactured in the country. As against this, some consumers, particularly of agricultural tractors, have complained against the meagre allocation of import quota and suggested that the issue of actual user licences for items not available indigenously. Some are also

of the opinion that the 50 per cent duty imposed on the imported pistons, which are not manufactured in India, is very high and unnecessarily taxing the industry using these articles. In order to remove the complaints of the producers we recommend that the list of restricted categories of pistons (Appendix 26, Annexure A of the Red Book) should be revised so that the indigenous piston assembly may be helped. At the same time where the small and special requirements of customers cannot be economically met by the indigenous producers import restrictions may be relaxed.

10.2. *Imports.*—The following table shows the import of piston assemblies, pistons, piston rings and gudgeon pins during the years 1960, 1961 and 1962 (January-November).


	1960		1961		1962 (January-November)	
	Qty. (Nos.)	Value (Rs.)	Qty. (Nos.)	Value (Rs.)	Qty. (Nos.)	Value (Rs.)
1. Piston Assemblies	155,339	36,38,467	145,192	20,80,768	93,975	13,52,636
2. Pistons	101,128	19,03,164	127,189	14,76,388	47,436	10,08,643
3. Piston Rings	350,314	9,79,206	307,837	7,59,049	691,962	6,54,569
4. Gudgeon Pins	185,166	4,54,931	56,283	74,159	88,863	2,88,299

The imports of piston assemblies have shown a gradual decrease since 1960; for pistons imports rose in 1961, fell again in 1962. On the other hand, imports of piston rings and gudgeon pins which were less in 1961, rose in 1962. Imports were mostly from the U. K., West Germany and the U. S. A.

11.1. At the time of the last inquiry (1960) there were no worthwhile exports of piston assemblies and other components we had, however, expressed a hope that with two large units then functioning with foreign collaboration and as their products were comparable to those of their counterparts overseas, an export market could be built up at least in our neighbouring countries. Since some of the collaboration agreements contained terms which could be regarded as restricting the scope for exports, we recommended that "such units should take steps to get the restrictive provisions suitably modified in their own interests as well as for the development of the export trade". As stated in paragraph 4.4 all the three units, namely, India Pistons Ltd., Goetze (India) Ltd., and Escorts Ltd., have secured permission to export their products.

11.2. India Pistons exported a small quantity to Pakistan. It has prepared an export catalogue and is establishing contacts in Hong Kong, Singapore, Malaya, Burma, Ceylon, Egypt, Jordan and Yugoslavia. In this connection, it has stated that it should get assistance of the Indian Trade Commissioners stationed in our neighbouring countries for such market survey information as types and models of vehicles in operation, competitive products available, etc. Goetze has also assured that as soon as its production becomes economical on its programmed expansion, it would be able to export and will not be restricted to neighbouring territories only.

12. The protected items of piston assemblies and components thereof are assessed to duty under item No. 12. Existing rates of duty 75(12A) of the First Schedule to Indian Tariff Act, 1934. The current rates of duty are as follows:

Item No.	Name of article	Nature of duty	Standard rate of duty	Preferential rate of duty if the article is the produce or manufacture of			Duration of Protective rates of duty
				The United Kingdom	A British Colony	Burma	
75. (12A)	The following articles adapted for use as parts and accessories of internal combustion engines of all kinds but excluding such articles as are adapted for use exclusively as parts and accessories of internal combustion engines of agricultural tractors and aeroplanes, namely:—  Trunk piston assembly of diameter 153 millimetres and below, trunk pistons of diameter 153 millimetres and below trunk piston rings (including chromium plated rings) of diameters 153 millimetres and below and gudgeon pins for trunk pistons of diameter 153 millimetres and below.	Protective	50 per cent <i>ad valorem</i> .	 वन्दे मातरम्			31st December, 1963.-

NOTE.—(1) Under the Finance Act, 1963 a general surcharge of 10 per cent has been added on all import duties.

(2) Under Government of India, Ministry of Finance (Revenue Division Notification No. 198 Customs, dated the 24th December, 1955, articles falling under this Item, if of the United Kingdom manufacture, are exempt from the payment of so much of the Customs duty leviable thereon as is in excess of 42½ per cent *ad valorem*:

Provided that the said articles are adapted for use exclusively as parts and accessories of motor vehicles other than motor cars including taxi cabs.

13.1. Information relating to c. i. f. prices and landed costs obtained from Collectors of Customs and importers is given in Appendix VI. Among the costed items of indigenous production these details are available only in respect of Fiat 1100, Dodge, Willys Jeep, Standard 10 and Perkins.

13.2. In regard to certain makes the c. i. f. figures showed considerable divergence. For example, an Asso piston assembly set of four Fiat was shown as Rs. 28 c.i.f. against Rs. 41.35 for a similar set of Hepolite for Fiat, which tallied with Rs. 10.27 per single piston assembly of Bricomvo (also U. K.). Similar divergences of Rs. 45.28 per set of four and Rs. 9.33 per piston assembly from U. K. was noticed for Standard 10, of Rs. 13.50 and Rs. 9.02 per piston assembly for Willys Jeep and Rs. 14.00 and Rs. 20.91 each for Dodge piston assembly. As pointed out in our last Report the divergence might be due to certain low cost imports being made at original equipment prices. A similar divergence was also noticed between 'Specialloid' and other makes for Perkins for which it was agreed that the higher price could be taken as more representative.

13.3. India Pistons has also furnished f. o. b. prices of products of its collaborators from which c. i. f. prices could be derived. These have also been taken into account in determining the lowest normal c. i. f. prices for purposes of comparison.

14.1. Besides India Pistons Ltd., Madras, whose costs have been examined at successive inquiries we had a cost examination made of Goetze (India) Ltd., and Escorts Ltd. in regard to the output of the protected categories. The reports of the Cost Accounts Officer have been sent as confidential enclosures to the Report.

14.2. List prices of the latter two producers were generally found to be higher than those of India Pistons who claimed to have made no change in the prices of their products since 1958 despite many factors raising cost of production. A certain difference in pattern of production, namely, individual casting of rings by Goetze as against predominantly centrifugal casting by India Pistons, a higher scrap incidence and melting loss, higher costs of pistons due to use of imported castings during the period and lower utilisation of plant facilities were offered as an explanation for the other producer's prices being higher than India Pistons. It was also clear that the peculiar selling arrangements by which Goetze has to give its entire output to Escorts as a sole distributor was also a promoting factor for the latter showing its ring costs in the cost of piston assemblies (other than original equipment) at a higher figure. In the absence of a proper costing system with Goetze and Escorts in contrast with India Pistons and Escorts' avowed inability to work out estimates for the future in the present stage of their expansion plans, it was decided not to adopt their prices but to take the fair ex-works prices for India Pistons' products as representative for assessing the disadvantage to the indigenous products as against imported ones.

14.3. India Pistons maintains a good system of accounts and also has a good system of internal check and it proposes to install a system of standard costs and budgetary control shortly. The method followed by us for costing was the same adopted during previous inquiries. Though the audited accounts were available for the year ending March 1962, for purposes of cost finding, the accounts for the next six monthly period ending September 1962 were taken into account as it would more correctly reflect the recent trends in costs. We have referred in paragraph 5.1.2 to the expansion programme of the company during the period costed; the full effect as a result of the phased expansion having not been registered, production of pistons and gudgeon pins etc. was still only two-thirds of the rated capacity. The company manufactures about 42 varieties of piston assemblies of different types and sizes for the various engines and of these nine popular types whose sales were large and accounted for 75 per cent of the total production were selected for cost finding. The company has two foundries, one for manufacturing aluminium castings for pistons and the other for centrifugal castings for rings and liners. Single casting for a few types of rings and casting for sale to the general trade was also being done to some extent. This unit has also installed a forging plant for the manufacture of pistons for Tata-Mercedes-Benz which accepts only forged pistons.

14.4. For purposes of estimating its costs we have taken two shift working and an outturn of 600,000 each of pistons and gudgeon pins and 7.9 million rings of which 6.3 million would be cast iron, 1.3 million Duaflex and 0.3 million chromium plated rings. The production trends during the last few months have already exceeded the five lakh limit. The estimates of costs were discussed with the representatives of the company. For future production it has been assumed that the company would be using only indigenous aluminium or aluminium alloys and allowance has been made for the extra cost on this account. While there is no change in the other main raw material, pig iron, which is indigenously available, a countervailing excise duty on steel rods for gudgeon pins which is exclusively imported, has raised its cost. Suitable increases have been taken into account in regard to wages, establishment, consumable stores, repairs and maintenance, power and fuel, etc. on account of increased production envisaged. The incidence of labour amenities which have increased and gratuity have been taken into account as also emergency war risk insurance. Depreciation has been taken for the full double shift working at income-tax rates. Our cost examination showed that compared to the estimates made in 1960 the present costs have gone up practically in all elements due to higher prices of materials, electricity rates, scrap arisings, labour emoluments, increases in the quantum of dearness allowance, incentive bonus, etc. There was a revision in all salary grades for labour and increases in dearness allowance during this period which was reflected in a rise in this element of cost of 25 to 40 per cent. But it has been assumed and the company also hopes that when it steps up its future production to full capacity (at current levels) the resulting lower overheads would partially offset increases under other items of costs. We have also allowed

3 per cent by way of margin for contingencies. In fixing fair prices for the products selected we have assessed the capital employed taking into account working capital as equivalent to four months' cost (exclusive of depreciation) and allowed a return calculated at 12 per cent which is higher than the return allowed in the previous inquiry. In all the circumstances this would be fair, as we have generally allowed this higher rate of return in cases dealt with recently.

14.5. The fair ex-works prices fixed on the above basis for the selected items are given in the statement below. They are prices given for purpose of comparison with landed costs to help in determining protection and should not be taken as selling prices which will take into account selling expenses and market differentials, etc.

#### STATEMENT REFERRED TO IN PARAGRAPH 14.5

	Bore size	Fair ex-works price Rs.
<b>PISTON ASSEMBLY :</b>		
1. Perkins . . . . .	3.501"	22.559
2. Fiat 1100 . . . . .	68m.m.	13.314
3. Willys Jeep . . . . .	3 1/8"	17.195
4. Bullet (Royal Enfield) . . . . .	2.751"	16.939
5. Leyland . . . . .	3.961"	44.153
6. Standard . . . . .	63m.m.	10.808
7. Hindustan . . . . .	73.5m.m.	12.496
8. Dodge . . . . .	3 7/16"	21.085
9. Petters II . . . . .	80m.m.	22.052

#### PISTON RINGS :

	Width	
1. Perkins		
(i) Compression . . . . .	3/32"	0.425
(ii) Slotted Oil Control . . . . .	1/4"	0.794
(iii) Maxigorve Oil . . . . .	1/4"	0.794
(iv) Laminated . . . . .	1/8"	0.464

	Width	Fair ex-work prices
<b>2. Fiat :</b>		
(i) Compression . . .	2.49m.m.	0.340
(ii) Slotted Oil Control .	3.5m.m.	0.593
<b>3. Willys Jeep :</b>		
(i) Vacrom Internally Bevelled Compression .	3/32"	1.992
(ii) Internally Bevelld Compression . . .	3/32"	0.552
(iii) Slotted Oil Control .	3/16"	0.940
(iv) Expander . . .	3/16"	0.160
<b>4. Bullet (Royal Enfield) :</b>		
(i) Vacrom Compression.	1/16"	2.584
(ii) Taper Compression .	1/16"	0.823
(iii) Slotted Oil Control .	5/32"	0.983
<b>5. Leyland :</b>		
(i) Vacrom Keystone Hardened & Tempered Compression . . .	0.1324"	3.474
(ii) Keystone Hardened & Tempered Compression . . .	0.1324"	1.641
(iii) Slotted Oil Control .	1/4"	1.134
<b>6. Standard :</b>		
(i) Compression . . .	2m.m.	0.358
(ii) Duaflex . . .	5/32"	0.629
<b>7. Hindustan :</b>		
(i) Compression . . .	2m.m.	0.377
(ii) Slotted Oil Control .	5/32"	0.723
(iii) Duaflex . . .	5/32"	0.504
<b>8. Dodge :</b>		
(i) Internally Stepped Compression . .	3/32"	0.846
(ii) Slotted Oil Control .	5.32"	1.287
<b>9. Petters II :</b>		
(i) Vacrom Compression	3/32"	2.016
(ii) Compression . . .	3/32"	0.559
(iii) Slotted Oil Control .	3/16"	0.956

14.6. As far as Goetze (India) is concerned, although it has been working for nearly four years, in the absence of proper cost accounting with the company the cost for different types of rings had to be worked out by our Cost Accounts Officer mostly on an estimated basis in consultation with the technical personnel of the company. Unaudited accounts for the year ending 31st December 1962 were scrutinised in this connection. As against a capacity of 30 lakh rings on two shift basis, the company was actually manufacturing over 36 lakhs rings of which 4 lakhs was chromium plated. This was achieved by some departments working more than two shifts. Goetze rings are all manufactured by single cast process and its high incidence of rejections at the foundry are therefore higher than for India Piston's centrifugal castings. Even making allowance for the fact that a high percentage of the scrap is available for re-melting the total incidence of loss on scrap melting and casting is found to be abnormally high in comparison with India Pistons'. The company explains that this was largely due to unsuitable sand used in the moulds as also the pig iron not being of proper composition. In making an assessment of costs for the future this abnormal incidence of scrap cost has to be scaled down. Raw material costs have been taken at the latest level of prices and conversion charges have taken into consideration the increases in wages, power, consumable store, etc. Depreciation and return on capital employed have been computed on the same basis as in the case of India Pistons. It was further noticed that the company is having large amounts locked up in stores and spares. It was however noticed that while the fair ex-works costs of Goetze rings were comparable with those of India Pistons and for chromium plated rings this company's cost were lower, the cost of rings supplied to the sole selling agents (Escorts) have been taken into account at higher levels when sold by the latter as replacement items or as parts of piston assembly.

14.7. Escorts Ltd., the holding company of Goetze (India) Ltd., has gone into production since our last inquiry and manufactures pistons for automobile and stationary engines. Right up to 1962 the company was importing semi-finished pistons but towards the end of the year it has set up its own foundry for cast aluminium pistons and has installed a forging plant for the manufacture of Tata-Mercedes pistons from imported extruded alloys. As these two activities have been going on only for a short time and the plant is not working to full capacity determination of fair ex-works prices of Escorts' pistons has not been possible. Assumption of the cost of imported rough castings as were used during the actual period would also be unrealistic, as the company has in future to switch over to indigenous aluminium or aluminium alloys. The production of pistons is about two-third of the plant capacity. The scrap arisings which are excessive have been attributed to inexperience of workers and diamond turning. In the circumstances, while the company maintains that its list prices are higher because of higher costs and it has also sought to avoid any price increase since 1961, any assessment of its fair ex-works prices, product-wise, in comparison with the prices determined for India Pistons' product could not be made.



14.8. For the purpose of assessing the degree of disadvantage on which duty protection has to be considered for the indigenous product, we have accordingly decided to adopt the fair ex-works prices of India Pistons only. As a competitor who has in the present context been able to obtain a satisfactory net realisation on the basis of higher list prices there should be no hardship to products of Escorts or Goetze if protection is determined in relation to India Pistons' fair prices.

15. In the statement following fair ex-works prices of indigenous pistons assemblies and piston rings are compared with the c. i. f. and landed cost (ex-duty) of the corresponding imported products. Only selected items from Appendix VI referred to in paragraph 13 have been taken for comparison, the corresponding fair ex-works prices of these varieties have been taken as adequately representative since our estimated prices are based on the current pattern of production. Actual net realisations on the basis of list prices may not be quite paralleled being circumstanced by domestic market considerations.

Type of Pistons	(In Rupees)				
	Perkins	Fiat 1100	Willys Jeep	Dodge	Standar
<b>I. PISTON ASSEMBLY (each) :</b>					
(i) C. i. f. Price . . . . .	19.69	10.27	13.50	13.50	9.02
(ii) Clearing charges . . . . .	0.39	0.21	0.27	0.27	0.18
(iii) Landed cost ex-duty . . . . .	20.08	10.48	13.77	13.77	9.20
(iv) Fair ex-Works Price . . . . .	22.56	13.31	17.20	21.09	10.81
(v) Difference of (iv)—(iii) . . . . .	2.48	2.83	3.43	7.32	1.61
(vi) Difference as percentage of (i) . . . . .	12.6	27.6	25.4	54.2	17.8

Type of Rings	(In Rupees)	
	Dodge	Perkins
<b>II. PISTON RINGS (Set of 24 rings) :</b>		
(i) C. i. f. Price . . . . .	20.91	15.01
(ii) Clearing charges . . . . .	0.42	0.30
(iii) Landed cost ex-duty . . . . .	21.33	15.31
(iv) Fair ex-works price . . . . .	25.60	17.41
(v) Difference of (iv)—(iii) . . . . .	4.27	2.10
(iv) Difference as percentage of (i) . . . . .	20.04	14.00

Gudgeon pins are not included in the above assessment as they are seldom traded in separately from piston assemblies.

16.1. Due to absence of imports on account of restrictions the mode of comparison of all types of indigenous products with the corresponding types when imported is not feasible. But the statement above shows up a degree of variations ranging from 13 per cent to 54 per cent for different items. If taken with due weightage of products for the costed unit the average disadvantage will work out to 22 per cent of c. i. f. which is lower than the present landed cost with duty at protected rate of 50 per cent plus 10 per cent surcharge thereon. For this reason alone we are not recommending any reduction in duty. Certain development trends are clear. As compared to our estimates in 1960 there has been a greater shift to the use of indigenous raw material. While this is as it should be for the progress of a protected industry, it has also entailed higher raw material costs. Till indigenous raw material becomes readily available at prices comparable to those at which overseas producers are able to get a certain disadvantage will persist. At the same time with good technical collaboration the industry has developed satisfactorily and the quality of its products has improved. The manufacturers are also now more confident about diversifying production. But the size of the domestic market as such precludes the producers reaching a unit size and product economy comparable with that of main automobile or ancillary producers overseas. Higher efficiency in operation coupled with a comparative lower conversion cost per unit will alone help the domestic industry to face open competition if there were no restrictions on imports. Economies of large-scale production will only accrue with the implementation of the expansion plans involving substantial capital investment, which the main producers already have on hand now. It is also only in that stage that with adequate incentives the local industry could develop an export potential.

16.2. The industry also proposes to produce pistons and rings of above 153 mm. (6") diameter. Demand for such items will hardly be more than a small percentage of the total demand. Again most of the larger sizes would go for agricultural or industrial machinery and equipment which are at present enjoying duty-free concession or a low rate of duty (15 per cent *ad valorem*). Grant of protection to these categories prematurely will not help the industry but only affect the above consumers. Such diversification of output is necessary and can be helped only if the present protection continues for some time longer. Any reduction of the duty will also not directly help the consumer as present list prices are apparently high and more in sympathy with a trend to mark-up indigenous products of automobile spares at 70 per cent or 100 per cent over landed cost (with duty) of such items.

16.3. In all the circumstances we consider that continuance of protection for piston assemblies and components is necessary for the stabilisation and future expansion of the industry. We accordingly recommend that protection with the present rates of duty under item 75 (12 A) of the I. C. T. Schedule may be continued for another period of three years till 31st December, 1966.

17.1. The selling system adopted by the larger manufacturers of piston assembly and components as reported by them is briefly indicated.

17.1.2. Sales of India Pistons products as original equipment are handled direct by the producer, whereas replacement trade is effected through nine distributors located in four important cities, viz., Bombay, Calcutta, Delhi and Madras. Distributors appoint dealers under them and thus sales and service facilities are provided throughout India where private or commercial transport is used. Each distributor is allowed a trade discount of 20 per cent on the retail prices, in addition, quantity and bonus discounts are also given. Quantity discounts range from 5 to 7½ per cent on pistons and 5 to 15 per cent on rings. In the case of nationalised State Transport Undertakings, Government departments and Defence department which are given a priority, the company to facilitate prompt service, supplies directly at distributor's net price. Sales by Goetze (India) Ltd., to engine manufacturers are made directly. Other sales are all handled by Escorts Ltd., the sole selling agent which distributes through a net work of dealers and distributors throughout the country. Since products are sold to Escorts Ltd., at special low net prices, no further commissions, discounts and/or concessions are allowed. But the company says it is aware that the sole selling agent allows a discount of 35 per cent of the retail prices established by it to the main distributors and the latter on their part, allow discounts upto a maximum of 30 to 35 per cent to their dealers and retail trade, who in turn allow a discounts of upto 25 per cent to consumers. Unlike India Pistons this company has no rate contract with Director General of Supplies and Disposals and/or other Government departments. Escorts Ltd., also distributes its products through the engine manufacturers and through distributors. Supplies to the former are made at special net prices for both original equipment and replacement purposes. Discounts allowed on retail prices established by the company to the distributors are (i) 27½ per cent for pistons, piston with pin and circlips and piston assembly complete, and (ii) 35 per cent in the case of rings. The distributors of the company operate through their dealers and retailers all over the country. The trade and retailers are also reported to be allowing discounts of 15 to 17½ per cent on pistons and up to 25 per cent on rings to consumers. The company has not so far entered into a rate contract with D. G. S. & D.

17.2. The differences in selling systems and in discounts partly also accounts for a certain disparity in the list prices of the two producers. While we appreciate their position we are not satisfied that the differences are entirely cost based. To some extent producers, prices for particular varieties seem to have been fixed at least so far as replacement sales are concerned on market considerations. In this regard we must observe that a tendency to mark-up prices of automobile spares at 70 per cent or 100 per cent over landed cost of imported products is not justified, particularly when a high rate of protective duty is taken as part of landed cost.

17.3. Both the main producers have to a varying degree attempted to provide after-sales service through their service representatives. Their sales turnover kept pace with the increase in production since our last inquiry. In all circumstances the majority of consumers who have replied to our questionnaire have expressed the view that their requirements of pistons and components have adequately been met. Occasional shortages for particular varieties of products and complaints in some cases of protracted delivery periods have been received from a few consumers. The producers are prepared to execute any order of economic size (250 to 500 pieces) where special dies are not called for and even in the latter case if the price and time allowed for delivery compensate them. It would certainly help the direct consumers and the trade if orders which are bound to be small for individual requirements could be bulked together and placed on the producers. At the same time we have brought to the notice of the producers that it is their avowed responsibility to meet reasonable demands of the consumers without undue delay and particularly in the case of Government departments and public utility undertakings such causes for complaints should be promptly removed.

17.4. *Selling prices*:—We had mentioned in our 1960 Report that India Pistons had advised us that dealers' prices and consumers' retail prices were progressively reduced since 1953 and after 1957 no price increases have been effected. They pointed out that despite rise in costs since then no changes have been made in the list prices. Other producers also stated that they have maintained their list prices and no changes have been made for two years. A majority of consumers consider the prices of locally manufactured products reasonable and compare favourably with prices of imported products. A few manufacturers like Bajaj, Tempo and Ruston and Hornsby and direct consumers like Maharashtra State Road Transport Corporation have stated that the prices of indigenous products are high in comparison with the imported c. i. f. including 70 per cent mark up. It is not clear to us whether the comparison was sought to be made with specially low f. o. b. prices of certain overseas exporters which were comparable with suppliers of original equipment manufacturers. At the same time as we have received complaints about the disparity in list prices of comparable products of the two producers, we have looked into the matter. A certain disparity not fully justified on cost considerations is evident from the sales made by Escorts of piston assemblies when such assemblies which include Goetze rings marked up over net prices and imported gudgeon pins were sold as replacement equipment. The extent of different rates of trade discounts and the fact that some of the discounts were also passed on by the retailers to the consumers to some extent made a proper comparison difficult. On the basis of net realisations over sales to the two manufacturers, the disparity between such realisations and ex-work costs was less noticeable. As we have stated already there is scope for reduction in marking up indigenous auto parts *vis-a-vis* imported ones on their landed cost (cum duty) basis. Since the industry is now well established and has expanded its production manifold, it cannot rest content with saying that despite cost increases prices have not been raised

during the last few years. The acid test of an industry having properly established itself under the shelter of protection is the extent to which by achieving economies of output it can gradually bring down prices so that part of the benefit of protections in later years can be passed on to the consumer who had to bear the full impact of the burden in the early stages of protection. Having regard to these considerations and the example of certain other protected industries which have made periodic price reductions, we consider that producers for this industry should also follow such an example.

18. In paragraph 6.1.2 we have already drawn attention to the advantages in enabling established producers to complete their expansion plans so as to ensure early augmentation of capacity and cheaper investment therefor. In an industry of this type economies of size will greatly help to bring down costs. Such producers as have not already introduced it should maintain a proper system of cost accounting to assess both their financial and technical progress. Cost reduction is a continuous process which every efficient unit has to attempt. It will greatly help in this process if it is assisted to obtain adequate and timely supply of raw materials especially where some part of it is to be imported to enable it to work to capacity. While we recommend that manufacturers of piston assembly should be allowed every facility for this end they should not show any complacency in regard to their performance by comparing their current selling prices with a mark-up of 70 per cent or more over landed cost including duty of imported products.

19. Our conclusions and recommendations are summarised as  
 Summary of conclusions  
 and recommendations.  
 under:—

19.1. The installed capacity of the organised sector of the industry for the manufacture of pistons, piston rings and gudgeon pins increased from 358,000, 3,780,000 and 418,000 respectively in 1960, to 977,000, 6,600,000 and 600,000 in 1963. The production of these items was 679,043, 8,556,887 and 420,029 respectively during 1962. The small scale sector of the industry produced 165,149 pistons, 214,644 piston rings and 419,685 gudgeon pins during the same year.

[Paragraphs 6.1.2. and 6.2.1.]

19.2. In view of the rising targets of demand and the installation of capacities of new units before 1965-66 not being likely, expansion plans of established producers should be expedited and priority accorded to them for the release of foreign exchange as the raising of their capacity is quicker and would involve lesser additional cost and foreign exchange.

[Paragraph 6.1.2.]

19.3. The domestic demand for various items of piston assembly industry for 1963 and 1965 is estimated as under:—

		(In millions)	
		1963	1965
Piston . . . . .		1.5	2.0
Piston rings . . . . .		10.5	14.0
Gudgeon pins . . . . .		1.6	2.2

The figures for 1964 may be taken as the median.

[Paragraph 7.5.]

19.4. The authorities should consider the case of this industry favourably and ensure that its output does not fall on account of shortage of raw materials.

[Paragraph 8.4.]

19.5. The companies should spare no pains to locate proper sand for their foundry and ensure the resulting economy.

[Paragraph 8.5.]

19.6. As the producers are quality-conscious we have impressed upon them the need to take effective steps to eliminate complaints.

[Paragraph 9.1.2.]

19.7. In order to remove the complaints of producers, the list of restricted categories of pistons (Appendix 26, Annexure A of the Red Book) should be revised so that indigenous industry may be helped. At the same time where the small and special requirements of customers cannot be economically met by the indigenous producers import restrictions may be relaxed.

[Paragraph 10.1.2.]

19.8. The continuance of protection for piston assemblies and their components is necessary for the stabilisation and future expansion of the industry and the present rates of duty under item 75(12 A) of the I.C.T. Schedule may be continued for another period of three years till 31st December, 1966.

[Paragraph 16.3.]

19.9. Having regard to the consideration given in paragraph 17.4 to the scope of price reduction and the example of certain other protected industries which have made periodic price reductions we consider that producers of this industry should also follow such example.

[Paragraph 17.4.]

19.10. Cost reduction being a continuous process, such producers as have not already introduced it, should maintain a proper system of cost accounting to assess both their financial and technical progress.

[Paragraph 18.]

19.11. Manufacturers of piston assembly should be allowed every facility to obtain adequate and timely supply of raw materials, especially where some part of it is to be imported so as to reduce production costs. A tendency to mark-up prices of automobile spares at 70 per cent or 100 per cent over landed cost of imported products is not justified particularly when a higher rate of protective duty is taken as part of landed cost. Producers should not show any complacency in regard to their performance by comparing their current selling prices with such mark-up over landed cost including duty of imported products.

[Paragraphs 17.2. and 18.]

20. We wish to thank the manufacturers, importers, consumers and Government Departments concerned for their co-operation in connection with this inquiry.

**Acknowledgements**

K. R. P. AIYANGAR,  
*Chairman.*

J. N. SENGUPTA,  
*Member.*

R. BALAKRISHNA,  
*Member.*

PRAMOD SINGH,  
*Secretary.*

BOMBAY;  
Dated 27th May, 1963. }



सत्यमेव जयते

**APPENDIX I**  
**[Vide Paragraph 2.1]**

*List of firms and Bodies to whom questionnaires were issued and  
from whom replies have been received*

\*Indicates those who have replied.

†Indicates those who are not interested.

**A. PRODUCERS :**

- \*1. India Pistons Ltd., Huzur Gardens, Madras-11.
- \*2. Goetze (India) Ltd., Block H., Connaught Circus, New Delhi-1.
3. Hindustan Pistons (Private) Ltd., 52, Dams Road, Mount Road, P. O., Madras-2.
- \*4. Escorts Ltd., H-2, Connaught Circus, New Delhi-1.
5. Hindustan Motors Ltd., 8, India Exchange Place, Calcutta-1.
- \*6. Auto Piston Manufacturing Co., Batala Road, Amritsar.
- \*7. La-Prenca Industries Private Ltd., P. B. No. 7514, Goregaon East, Bombay-62.

**B. PROSPECTIVE PRODUCERS :**

1. Niranjani Auto Pistons Ltd., 14-F Connaught Circus, New Delhi-1.
2. Nathani Industries Pvt. Ltd., Scrap House, Quay Street, Darukhana, Bombay-10.

**C. CONSUMERS :**

- \*1. Cooper Engineering Ltd., Satara Road, Maharashtra State.
2. Indian Commercial Co. Ltd., 45-47, Apollo Street, P. O. Box No. 1621, Bombay-1.
- †3. Kulko Engineering Works Ltd., Ichalkaranji, Kolhapur. (Distt.).
- \*4. Mazagaon Dock Ltd., Dockyard Road, Bombay-10.
- \*5. Ruston & Hornsby India (Private) Ltd., 1, Forbes Street, P. O. Box No. 91, Fort, Bombay-1.
- †6. Textool Co. Ltd., Post Box No. 221, Ganapathy P. O., Coimbatore.
- †7. Premier Auto Electric Private Ltd., 69, Tardeo Road, Bombay-7.
- †8. The Zamindra Engineering Co., P. O. Box No. 7, Fazilka.
- \*9. Acme Manufacturing Co. Ltd. Antope Hill, Wadala, Bombay-31.
- \*10. Enfield (India) Ltd., Thiruvottiyur, Madras.
11. Massey Ferguson (India) Ltd. Post Box No. 3, Bangalore.
- \*12. Kirlosker Oil Engines Ltd., Elphinstone Road, Kirkee, Poona.
- \*13. Automobile Products of India Ltd., Bhandup, Bombay.
- \*14. Simpson & Co. Ltd. Mount Road, Madras.
- \*15. The Tata Engineering and Locomotive Co. Ltd., Bombay House, Bruce Street, Bombay-1.
- \*16. Ashok-Leyland Ltd., 38, Mount Road, Madras-2.
- \*17. Hindustan Motors Ltd., 8, Royal Exchange Place, Calcutta-1.
18. Premier Automobiles Ltd., Agra Road, Bombay.



- \*19. The Standard Motor Products of India Ltd., 29, Mount Road, Madras-2.
- \*20. Mahindra & Mahindra Ltd., Gateway Building, Apollo Street, Fort, Bombay-1.
- \*21. Southern Roadways Private Ltd., West Veli Street, Madurai.
- \*22. General Manager, B. E. S. T. Undertaking, Electric House, Colaba, Bombay-5.
- \*23. The Commissioner, Bombay Municipal Corporation, Bombay-1.
- \*24. The Secretary, Bombay Port Trust, Ballard Estate, Bombay-1.
- \*25. The Ahmedabad Municipal Transport, Ahmedabad.
- \*26. The Bihar State Road Transport, P. O. B. V. College. Patna.
- 27. The Director, Assam State Transport, Shillong.
- \*28. Controller of Stores, S. T. Central Stores, Bombay Central Bus Stand Bellasis Road, Bombay-8.
- 29. The Director, Kerala State Transport, Trivandrum.
- 30. General Manager, Andhra Pradesh Road Transport, Murshirabad, Hyderabad.
- \*31. Calcutta State Transport Corporation, 5, Nilgunge Road, 24-Parganas.
- 32. Honorary Director, Madras State Transport Department, Mount Road, Madras-2.
- 33. General Manager, Punjab Roadways, Amritsar.
- 34. General Manager, Mysore Government Road, Transport Deptt., Bangalore.
- 35. Transport Manager, Poona Municipal Transport, Poona-2.
- 36. Controller of Stores, North Eastern Railways, Gorakhpur.
- 37. Controller of Stores, Central Railway, V. T. Bombay-1.
- 38. General Manager, Southern Railway, Perambur, Madras-23.
- 39. General Manager, Eastern Railway, Calcutta.
- 40. General Manager, Northern Railway, New Delhi.
- 41. General Manager, South Eastern Railway, Calcutta.
- \*42. Controller of Stores, Western Railway, Churchgate, Bombay-1.
- 43. Chief Administrative Officer, Integral Coach Factory, Perambur, Madras.
- †44. Hind Equipment Corporation 24-B, Hamam Street, 4th Floor, Raja Bhadur Compound, Bombay-1.
- \*45. Indian National Diesel Engine Co. Ltd., Hall and Andersen Building (1st Floor), Park Street, Calcutta-16.
- \*46. Tractor and Equipment Corporation, Post Box No. 279, New Delhi.
- 47. Machines & Spares (India) Ltd., Fountain View, Darya Ganj, Delhi-7.
- 48. Hindustan Motor Corporation Ltd., 8, Royal Exchange Place, Calcutta.
- \*49. Modern Engg. & Moulding Co., Shahpur Mills Compound, New Kalyan Mills, Naroda Road, Ahmedabad-2.
- 50. Patel Mavji Kanji & Bros., Jail Gate Road, Rajkot.
- 51. Lakshmiratan Engg. Works Ltd., Industrial Area No. 1, Faridabad.
- 52. Punjab Oil Expeller Co. G. T. Road, Ghaziabad.
- †53. Shri Guru Nanak Engg. Co. Ltd. G. T. Road, Ghaziabad.
- 54. Tractor and Bulldozers Private Ltd. Kolwada Road, Sion, Bombay.
- \*55. Goodearth Co. Ltd., Sunderson Court, 16, Ajmeri Gate Extension, New Delhi.
- \*56. Veegal Engines & Engineering Ltd., 31, Chittaranjan Avenue, Calcutta-12.

- 57. Nundy Brothers, 34, Dharamtola Street, Calcutta.
- 58. Lynz Machinery Co. Ltd. 104, Ultganga Main Road, Calcutta-4.
- \*59. Escorts Ltd., Connaught Circus, New Delhi.
- \*60. T. V. Sundram Iyengar & Sons Private Ltd. T. V. S. Building, West Veli Street, Madurai.
- \*61. Bajaj Tempo Ltd., 134, A. Besant Road, Worli, Bombay-18.

#### D. CONSUMERS' ASSOCIATION :

- 1. Automobile Manufacturers' Association of India, India Exchange Place, Calcutta-1.
- \*2. The Secretary, Engineering Association of India, India Exchange Place, Calcutta-1.
- 3. The Secretary, Association of Engine Manufacturers of India, C/o. Kirloskar Oil Engines Ltd., Kirkee, Poona-3.
- 4. Bombay Motor Merchants' Association, Sukhnagar, Sandhurst Bridge, Bombay-7.
- 5. Calcutta Motor Dealers' Association, P-6, Mission Row Extension, Calcutta.
- 6. All India Automobile & Ancillary Industries Association, Brabourne Stadium, 87, Veer Nariman Road, Bombay-1.
- 7. Tractor Earthmoving & Construction Equipment Distributors' Association, C/o The Bombay Chamber of Commerce, Mackinnon Mackenzie Building, Bombay-1.
- †8. Indian Road & Transport Development Association Ltd., 27, Bastion Road, Bombay-1.
- †9. Association of Indian Automobile Manufactureres, Army & Navy Building, Mahatma Gandhi Road, Bombay-1.
- †10. Consumers' Association of India, 4, Kashmere Gate, Delhi-6.
- \*11. Federation of All India Spare parts Dealers' Association, Kashmere Gate, Delhi-6.

#### E. IMPORTERS :

- \*1. Ashok Leyland Ltd., Bank of Mysore Building, N.S.C. Bose Road, Madras 1.
- \*2. Greaves Cotton & Co. Ltd., 1, Forbes Street, Post Box No. 91, Bombay-1.
- 3. K. B. Thaker & Co., P. O. Box No. 1136, Commerce House, 140, Meadows Street, Bombay-1.
- \*4. Madras Auto Service Ltd., 37, Mount Road, Madras.
- \*5. Martin Burn Ltd., 12, Mission Row, Calcutta-1.
- 6. Premier Automobiles Ltd., Agra Road, Kurla, Bombay.
- \*7. Simpson & Co. Ltd., 202/203, Mount Road, Madras-2.
- \*8. Indian Motor Parts and Accessories Pvt. Ltd., 1/155, Mount Road, Madras-2.
- †9. Parry & Co. Ltd., Post Box No. 12, Madras-1.
- \*10. Standard Motor Products of India Ltd., 29, Mount Road, Madras-2.
- †11. The Modern Automobiles, 4/17-A, Mount Road, Madras-2.
- 12. T. V. Sundram Iyengar & Sons Pvt. Ltd., T. V. S. Building, West Veli Street, Madurai.
- \*13. Voltas Ltd., Graham Road, Ballard Estate, Bombay.
- 14. Girdharilal & Co., Sandhurst Bridge, 403, Sukh Sagar (4th Floor), Bombay-7.
- 15. Noshir Jahangir & Co., Cumballa Chamber Cumballa Hill Road, Bombay-26.

**F. GOVERNMENT (CENTRAL) :**

- \*1. The Senior Industrial Adviser (Engineering), Department of Technical Development, (Automobile Directorate), Ministry of Economic & Defence, Co-ordination, Udyog Bhavan, New Delhi.
- \*2. The Development Commissioner, Small Scale Industries, Udyog Bhavan, New Delhi.
- \*3. The Consulting Engineer to the Government of India, Ministry of Transport and Communication, (Road Wing), Statistics Division, Jammagar House, New Delhi.
- \*4. The Collector of Customs, Bombay.
- \*5. The Collector of Customs, Madras.
- \*6. The Collector of Customs, Calcutta.
- \*7. The Collector of Customs, Cochin.
- 8. The Director of Industries, Government of Madras, Madras.
- \*9. The Director of Industries, Government of Punjab, Chandigarh.
- †10. The Chief Commissioner, Delhi Administration, Delhi.
- \*11. The Director of Co-ordination and Statistics, Director General of Supplies and Disposals, National Insurance Building, Parliament Street, New Delhi.
- 12. Secretary to the Government of India, Ministry of Defence, New Delhi.
- \*13. The Director, Indian Standards Institution, Manak Bhavan, 9, Mathura Road, New Delhi.
- \*14. Iron and Steel Controller, 33, Netaji Subhash Road, Calcutta.

**G. RAW MATERIAL SUPPLIERS :**

- \*1. Indian Aluminium Co. Ltd., 31, Chowringhee Road, Calcutta-16.
- \*2. The Aluminium Corporation of India Ltd., 7, Council House Street, Calcutta-1.
- \*3. Hindustan Aluminium Corporation Ltd., Industry House, 159, Churchgate Reclamation, Bombay-1.

**H. CHIEF SECRETARIES OF STATES :**

- †1. The Chief Secretary to the Government of Andhra Pradesh, HYDERABAD.
- 2. The Chief Secretary to the Government of Assam, SHILLONG.
- 3. The Chief Secretary to the Government of Bihar, PATNA.
- \*4. The Chief Secretary to the Government of West Bengal, CALCUTTA.
- †5. The Chief Secretary to the Government of Gujarat, AHMEDABAD.
- †6. The Chief Secretary to the Government of Jammu and Kashmir, SRINAGAR.
- †7. The Chief Secretary to the Government of Kerala, TRIVENDRUM.
- †8. The Chief Secretary to the Government of Madhya Pradesh, BHOPAL.
- \*9. The Chief Secretary to the Government of Maharashtra, BOMBAY.
- †10. The Chief Secretary to the Government of Mysore, BANGALORE.
- 11. The Chief Secretary to the Government of Orissa, BHUBANESHWAR.
- †12. The Chief Secretary to the Government of Rajasthan, JAIPUR.
- †13. The Chief Secretary to the Government of Uttar Pradesh, LUCKNOW.
- †14. The Chief Commissioner, Himachal Pradesh, SIMLA.

## APPENDIX II

[Vide Paragraph 2.2]

*List of Factories visited by the Commission and its Officers*

Name of the factory	By whom visited	Date of visit
India Pistons Ltd., Madras	Shri K. R. P. Aiyangar . . .	9-11-1962
	Dr. R. Balakrishna, Member . . .	19-2-1963
	Shri Hari Bhushan, Technical Director (Engg. & Metallurgy)	14-11-1962
Hindustan Pistons Ltd., Madras.	Dr. R. Balakrishna, Member . . .	20-2-1963
	Shri Hari Bhushan, Technical Director (Engg. & Metallurgy)	14-11-1962
Escorts Ltd., Bahadurgarh.	Shri K. R. P. Aiyangar, Chairman.	19-4-1963
Goetze (India.) Ltd., Bahadurgarh.		
Do.		
	Shri Hari Bhushan, Technical Director (Engg. & Metallurgy).	4-4-1963
Hindustan Motors Ltd., Calcutta.	Shri Hari Bhushan, Technical Director (Engg. & Metallurgy). . .	23-1-1963

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## APPENDIX III

[Vide Paragraph 2.4]

*List of Persons who attended the Public inquiry*

Name of the representative	Representing
<b>A. PRODUCERS :</b>	
1. Shri M. K. Raju . . . . .	} India Pistons Ltd., Huzur Gardens, Sem- biam, Madras-11.
2. Shri H. S. Shivashankar . . . . .	
3. K. E. S. Ghullam Mohideen . . . . .	
4. Shri M. K. Swami . . . . .	} Escorts Ltd., H-2, Connaught Circus, New Delhi-1 and Goetze Ltd., Block-H, Connaught Circus, New Delhi-1.
5. Shri Oberai . . . . .	
<b>B. CONSUMERS :</b>	
6. Shri H. N. Gujar . . . . .	Premier Automobiles, Agra Road, Kurla, Bombay-70.
7. Shri M. N. Kumta . . . . .	Mahindra & Mahindra, Gateway Build- ing, Apollo Bunder, Bombay-1.
8. Shri N. Ramamurthi . . . . .	Ashok Leyland, Bank of Mysore Build- ings, N. S. C. Bose Road, Madras-1.
9. Shri D. D. Hirebet . . . . .	Tata Engineering & Locomotive Co. Ltd. Bombay House, 24, Bruce Street, Fort, Bombay-1.
10. Shri K. S. K. Iyengar . . . . .	Ruston & Hornsby, Chinchvad, Distt. Poona.
11. Shri P. C. Munot . . . . .	Bajaj Tempo Ltd., 134, Dr. Annie Besant Road, Worli, Bombay-18 and Bajaj Auto-Limited, 134, Dr. Annie Besant Road, Worli, Bombay-18.
12. Shri S. Johns . . . . .	Maharashtra State Road Transport Corporation, Central Stores, Bellasis Road, Byculla, Bombay-8.
13. Shri Pavri . . . . .	Bombay Electric Supply & Transport Undertaking, BEST House, Bombay-1.
14. Shri F. Vicgas . . . . .	} Bombay Port Trust, Administrative Offices, Ballard Road, Fort, Bombay-1
15. Shri G. M. Rana . . . . .	
16. Shri K. R. Narayanaswamy . . . . .	Controller of Stores, Western Railway, Churchgate. Bombay-1.
<b>C. CONSUMERS, ASSOCIATION :</b>	
17. Shri N. Balakrishna . . . . .	Association of Indian Automobile Manu- facturers, Army and Navy Building, Mahatma Gandhi Road, Bombay-1.
18. Shri A. K. Patel . . . . .	Bombay Motor Merchants, Association, Ltd., Sandhurst Bridge, Sukh Sagar, Bombay-7.
<b>D. IMPORTERS :</b>	
19. Shri C. S. K. Sundaram . . . . .	Voltas Ltd., 19, Graham Road, Ballard Estate, Bombay-1.
20. Shri K. M. Thaker . . . . .	K. B. Thaker and Co., 110, Commerce House, 140, Meadows Street, Bombay-1.

Name of the representative	Representing
<b>E. RAW MATERIAL SUPPLIERS :</b>	
21. Shri V. D. Agarwal . . . .	The Aluminium Corporation of India, 7 Council House Street, Calcutta.
22. Shri D. K. Majumdar . . . .	Hindustan Aluminium Corporation Ltd., Industry House, 159, Churchgate Recla- mation, Bombay-1.
<b>F. OTHERS:</b>	
23. Shri H. P. Adukia . . . .	} Indian Smelting and Refining Co., Ltd., Industry House, 159, Churchgate Recla- mation, Bombay-1.
24. Shri H. K. Bhat . . . .	
<b>G. GOVERNMENT DEPARTMENTS :</b>	
25. Shri N. T. Gopala Iyengar . . . .	Department of Technical Development, Ministry of Economic and Defence Co- ordination, Udyog Bhavan, Maulana Azad Road, New Delhi.
26. Shri J. M. Srivastava . . . .	Development Commissioner, Small Scale Industries, Udyog Bhavan, New Delhi.
27. Lt. Col. O. G. Eapen . . . .	Iron and Steel Controller, 33, Netaji Subhas Road, Calcutta-1.
28. Shri A. M. Mankikar . . . .	Director General of Supplies and Dispo- sals, N. I. Building, Parliament Street, New Delhi.
29. Shri N. K. Ramaswamy . . . .	Indian Standards Institution, Manak Bha- van, 9, Mathura Road, New Delhi.
30. Shri B. S. Kokatay . . . .	Collector of Customs, Bombay.
31. Shri D. S. Godbole . . . .	Director of Industries, Government of Maharashtra, Bombay.

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## APPENDIX IV

[Vide paragraph 5.2]

*List showing the names of Small-scale units and the items manufactured by each*

State	Name of unit	Product manufactured
Madras	1. Hindustan Pistons (P) Ltd., Madras-2.	Pistons with gudgeon pins
	2. The Dovel Pistons (P) Ltd., Madras-2.	„ „
Gujarat	3. Machinery & Equipment Manufacturing Co. (P) Ltd., Ahmedabad.	Pistons
	4. Swati Industries, Rajkot.	Do.
	5. Jaint Engineering Works, Rajkot	Do.
	6. Ganesh Engg. Works, Rajkot	Do.
	7. Prakash Foundry & Engg. Works, Rajkot.	Do.
	8. Scientific Engg. Works, Rajkot	Do.
	9. National Engineering Works, Rajkot.	Do.
	10. Morad Engg. Works, Rajkot	Do.
	11. Janata Engineering Works, Rajkot	Do.
	12. United Industrial Corpn. Rajkot	Do.
	13. Premier Engg. Works, Rajkot	Do.
	14. Shakti Engg. Works, Rajkot	Do.
	15. Bharat Industries, Rajkot	Do.
	16. Chhaniara Bros. Works, Rajkot	Do.
	17. Vengard Foundry, Rajkot	Do.
	18. Laxmi Engg. Works, Rajkot	Do.
	19. New Moulding Works, Rojkot	Do.
	20. Central Engg. Works, Rajkot	Do.
	21. Udia Industries, Rajkot	Do.
	22. New Ashok Engg. Works, Rajkot	Do.
	23. Swaminarayan Engg. Works, Rajkot	Do.
	24. Karnal Engg. Works, Rajkot	Do.
	25. Prakash Engg. Works, Rajkot	Do.
	26. Jaihind Mech. Lathe Works, Rajkot	Do.
	27. Mech. Lathe & Engg. Works, Rajkot	Do.
	28. Gauhan Engg. Works, Rajkot	Do.
	29. Nutan Saurashtra Engg. Works, Rajkot.	Do.
	30. Satynarayan Mech. Works, Bhavnagar.	Do.
	31. Dilip Engg. Works, Bhavnagar	Do.
	32. Swastik Mech. Works, Bhavnagar	Do.

APPENDIX IV—*contd.*

State	Name of unit	Product manufactured
Gujarat	33. Vadgama Engg. Works, Jamnagar	Pistons
	34. Renu India, Ahmedabad.	Piston Rings
	35. Veena Engineering Works, Rajkot	Do.
	36. Umrana Brothers, Surendranagar	Do.
	37. Laxmi Steel Products, Ahmedabad	Gudgeon pins
	38. Photo Engineering, Ahmedabad-10	Do.
	39. Rayani Industries, Rajkot.	Do.
	40. Krishna Engineering Works, Rajkot.	Do.
	41. Hind Engg. Works, Rajkot.	Do.
	42. Swastik Engg. Works, Rajkot	Do.
	43. Ashapura Industry, Rajkot	Do.
	44. Mistry Laxman Kudwa & Sons, Surendranagar.	Do.
Uttar Pradesh	45. Jain Engg. Industries, Agra.	Pistons
	46. Sun Rise Engg. Works, Agra.	Do.
	47. Piston and Piston Rings Industries, Agra.	(i) Pistons (ii) Piston Rings
	48. Pioneer Mechanics, Agra.	Pistons
	49. Hind Industrial Corpn., Agra	Do.
	50. Mercury Diesels, Agra	Pistons Assembly.
	51. Atul Engg. Works, Agra	Do.
	52. Bhatia Industrial Corpn., Agra.	Do.
	53. Jain Engg. Works, Agra	Pistons
	54. Agra Mechanical Works, Agra	Do.
	55. Alfa Engg. Works, Agra	Do.
	56. Anand Centrifugal Castings, Agra	Do.
	57. Rattan Diesels, Agra.	(i) Pistons (ii) Piston Rings
	58. Chandoliva Bros., Agra	Pistons
Maharashtra	59. La-prenca Industries Pvt. Ltd., Bombay.	Piston, Gudgeon pins.
Mysore	60. Auto Electric Works, Belgaum	
	61. Bharat and Auto Works, Belgaum	
	62. Vijaya Metal Industries, Belgaum	
	63. B. H. K. Sheriff & Sons, Bangalore-2.	
	64. Rajaram Factory, Hubli	
Delhi	65. Sakun Engg. Works, Delhi.	1. Pistons 3"-10" Bore 2. Liners 3"-10" Bore 3. Gudgeon Pins 1"-5" dia. 4. Pistons of C. I. & aluminium. 5. Liners of C. I. (only for Diesel Engines).



APPENDIX IV—*contd.*

S t a t e	N a m e o f u n i t	P r o d u c t m a n u f a c t u r e d
Delhi	66. Maya Industries, New Delhi . . .	1. Pistons 3"-10" Bore 2. Liners 3"-10" Bore 3. Pistons of C. I. 4. Lines of C. I. (only for Diesel Engines).
	67. Paramount Engg. Works. . .	1. Pistons up to 8" Bore 2. Liners up to 8" Bore (For Diesel Engines only).
	68. Ideal Piston Mfg. Co., New Delhi . .	1. Pistons 1½"-7½" Bore (can mfg. upto 24" Bore). 2. Pistons of aluminium and C. I. 3. Liners 1½"-7½" Bore. 4. Liners of C. I. alloy (for Diesel engines, scooters, cars, trucks, tractors, etc.).
	69. B. A. R. Industries (P) Ltd., New Delhi.	1. Steel segment oil rings. 2. Steel segment helper rings. 3. For diesel engines tractors & all vehicles.
	70. NIM Industries, Faridabad . . .	Steel segment rings 2" & 4" size.
	71. Auto Engg. Works, Jullundur . . .	Auto Pistons
Punjab .	72. Auto Pistons Mfg. Co., Amritsar . .	1. Auto Pistons 2. Gudgeon Pins
	73. The Phagwara Chief Coop. Ind. Society Ltd., Phagwara.	Gudgeon Pins
	74. Veer Engg. Industries, Phagwara. . .	Do.
	75. Friends Auto Industries, Phagwara . .	Do.
	76. Ratan Mechanical Works, Ludhiana.	Do.
Calcutta	77. Maco Industries (P) Ltd., Sonapat . .	Do.
	78. Machine Parts Ltd., Calcutta-20. . .	Piston Rings
	79. Emar (I) Pvt. Ltd., Calcutta-1 . . .	Piston Assembly

## APPENDIX V

[Vide paragraph 10·1·1]

### *Statement showing import trade control policy*

#### A. PISTON ASSEMBLIES

*April 1960 to September 1960*

Established importers were granted 100% general and 100% soft quota licences and not more than 40% of the face value of these could be utilised for import of aluminium piston assemblies of 6" diameter and less. Further, within the face value restriction of 40%, not more than 25% of this could be utilised for import of aluminium piston assemblies (including over sizes) for certain models. Applications from Government projects and State Transport Organisations for import of complete piston assemblies of vehicles against their actual user's licences were to be considered *ad-hoc* with the exception of certain models specified in Annexure A to Appendix XXVI. Such permission where granted was to be endorsed on the A. U. licences and for the specified parts indicating the part number, the sizes and respective quantities. These were allowed only in consultation with the Development Wing. In addition, quota licences issued to established importers for import of spares of agricultural tractors [S. No. 74 (iii)/v], spare parts of motor cycles and scooters and spares of earth moving equipment [S. No. 65 (5) (ii) (a)/v] were allowed to be endorsed for the import of complete piston assemblies other than those for certain types of engines mentioned in Annexure 'A', of Appendix XXVI. Such endorsements were to be made only for the specified parts indicating part number and the size and the respective quantities and were to be limited only to those equipment for which the applicant was the sole agent in India. Such permission was granted upto a value of Rs. 2500 in each case, but could be extended upto Rs. 4000 in the case of established importers of spare parts of earth moving equipment. Licences were not to be valid for the import of piston rings except as a component part of complete piston assemblies. The calculation of quota was based on the import of complete piston assemblies and pistons. Part imports of gudgeon pins, bushings and circlips were not to be taken into account in the calculation of quotas for piston assemblies. Not more than one set of complete piston assembly for any internal combustion engine was licensed to actual owner of the equipment at the ports, provided not more than one licence was issued to each party during the period. Piston pins and bushings whether made of aluminium or cast iron as parts of aluminium piston assemblies of 6" diameter and below (excluding banned type) could only be imported within the face value restrictions for aluminium piston assemblies. However, piston pins and bushings irrespective of their size or metal of which they were made, when imported as parts fitted to piston assemblies of permissible type, which were not subject to face value restrictions were allowed clearance without any face value restrictions.

*October 1960 to March 1961*

Established importers were granted 80% general and 80% soft quota as against 100% in respect of each of the category in the previous licensing period. But for this, there was no change in the policy.

*April 1961 to September 1961*

The policy for previous period was continued during this period also, except for the removal of the distinction between general quotas and soft quota and all licences were issued as valid from general area covering all countries, except that certain licences issued under capital goods and H.E.P. schemes and export promotion schemes were restricted to specified country or countries.

*October 1961 to March 1962*

The established importers' quota was further reduced to 75%. But for this, the policy for the previous period was continued during this period also.

*April 1962 to March 1963*

The import trade control policy announced in April 1962 covered a period of one year ending 31st March 1963, unlike the earlier system of bi-annual announcement of the policy. The established importers' quota was further reduced to 66 2/3%. All other stipulations remained unchanged.

**B. PISTON RINGS***April 1960 to September 1960*

Established importers were granted a quota of 50% general and 50% soft, with proviso that not more than 25% of the face value of these quota licences could be utilised for import of piston rings of 6" diameter and below. Further, piston rings (both of 6" diameter and below, and over 6" diameter) were also allowed to be imported when imported with—

- (a) original equipment either c. k. d. or assembled; and
- (b) fitted to piston when imported as complete piston assemblies.

Established importers of motor cycle spares having quotas for piston rings were granted additional licences for import of this item on the basis of a quota of 10% general and 10% soft. Those additional licences were to be valid only for import of piston rings specially adapted for use on motor cycles and Scooters.

Since September 1960, the above import policy has remained unchanged, except for the following gradual reductions in the established importers quota shown against each period:—

October 1960 to March 1961	40%
April 1961 to September 1961	20%
October 1961 to March 1962	17½%
April 1962 to March 1963	12½%

On 8th June 1962, Government imposed a 50 per cent cut in the quota already granted to established importers due to deterioration in the country's foreign exchange position [*Vide* Public Notice No. 65-ITC (PN) 62, dated 8th June 1962]. The cut was not to be applicable to licences granted to established importers under aid from U.S.A. A cut was also to be applied in licensing the requirement of actual users from free resources. The extent of cut was to be decided in each case on merits, subject to the availability of foreign exchange. Government imposed a further cut on 24th December 1962, under Public Notice No. 167-ITC (PN)/62. In accordance with this notification, supplementary licences for the period October 1962—March 1963 were not to be granted to established importers except in the case of items indicated in annexure I to this public notice. The extent of cut applicable to the half-yearly entitlement varied according to items, the minimum being 50 per cent. The second half of the annual licences granted to actual users were also subject to a cut which was decided on merits in each case.

## APPENDIX VI

[Vide Paragraph 13.1]

Statement showing c. i. f. prices and landed costs

Sl. No.	Source of Information	Origin of import	Date of Import	Type and specification	Unit	CIF price	Cus-toms duty	Clearing charges	Landed cost	Remarks
1	2	3	4	5	6	7	8	9	10	11
A. PISTON ASSEMBLY :										
Fiat 1100										
1.	Collector of Customs, Bombay.	Italy	17-1-62	Asso	Set of 4	Rs. 28.00	Rs. 14.00	Rs. 0.25	Rs. 42.25	
		Do.	17-2-62	Asso/ABE 68 MM	Do.	28.00	14.00	0.25	42.25	
		U.K.	24-2-62	Hepolite 68 mm No. Rw 14582.	Do.	40.90	20.45	0.25	61.60	Piston complete.
		Italy	28-2-62	Asso 103	Do.	28.00	14.00	0.25	42.25	Pistons with rings & pins.
		Do.	27-3-62	Do.	Do.	28.00	14.00	0.25	42.25	
		U.K.	26-4-62	Hepolite 68 mm No. 14852.	Do.	41.25	20.62	0.25	62.12	Pistons complete.
		Italy	2-6-62	Asso 103 F	Do.	27.00	13.50	0.25	40.75	Pistons with rings & pins.
		U.K.	18-6-62	Hepolite pistons No. 14582.	Do.	41.40	20.70	0.25	62.35	Do.
		Italy	16-11-62	Asso 103	Do.	28.44	14.22	0.25	42.91	Do.
		Do.	22-12-62	Asso	Do.	28.00	14.00	0.25	42.25	Do.
		Do.	2-1-63	Do.	Do.	28.00	14.00	0.25	42.25	Pistons with pins, rings & locks.

1	2	3	4	5	6	7	8	9	10	11
				<i>Fiat 1100</i>						
2.	Collector of Customs, Calcutta.	U.K.	Nov.		Per unit	Rs.	Rs.	Rs.	Rs.	
3.	India Motor Parts & Accessories Ltd., Madras.	Do.	July '62	"Bricovmo" 68 mm bore.	Do.	10.27	5.15	0.22	15.64	
4.	Collector of Customs, Madras.	Do.	25-7-62	Covmo Part No. 8178.	Do.	10.27	5.15	0.23	15.65	
				<i>Dodge</i>						
1.	Collector of Customs, Calcutta.	U.K.	May '62	CS 200/1 } 020, 060, 030	Per unit	14.00	7.00	0.50	21.50	
		Do.	Do.	CS 311 Std.	Do.	13.50	6.75	0.25	20.50	
				<i>Willlys Jeep</i>						
1.	Collector of Customs, Calcutta.	U.K.	May '62	RSW 11801	Per Unit	13.50	6.75	0.25	20.50	
		Do.	Do.	RSW 11817	Do.	9.33	4.67	..	14.00	
				<i>Standard 10</i>						
1.	Collector of Customs, Bombay.	U.K.	15-2-62	Bricovmo 68 mm	Set of 4	45.28	22.64	0.25	68.17	
2.	Collector of Customs, Calcutta.	Do.	July '62	St. 373 Std. 030	Per each	9.02	4.51	0.17	13.70	
				<i>Perkins</i>						
1.	Collector of Customs, Calcutta.	U.K.		Perkins (P6)	Per each	25.50	12.75	0.75	39.00	
2.	India Motor Parts Accessories Ltd., Madras.	Do.	July '62	'Specialloid' aluminium 3½ bore.	Do.	19.69	9.85	0.21	29.75	

3. Collector of Customs, Madras.	Do.	10-7-62	Specialloid P6 part No. 181C	Do.	19.69	9.85	0.21	29.75	
4. Collector of Customs, Bombay.	Do.	20-6-62	Bradford Pistons } P 181C for Per- } kins P6 }	Set of 6	118.60	59.30	0.25	178.15	Pistons complete.
5. Simpson & Co., Madras.	Do.		P6 V Std. Assembly.	Do.	110.00	46.75	0.50	157.25	

*Others*

1. India Motor Parts & Accessories W. Germany Ltd., Madras.		Oct '62	'Mahale' (Mercedes Benz) Aluminium 90 mm	Per each	36.29	18.14	0.27	54.70	
2. Collector of Customs, Cochin.	Do.	April '62	Mercedes Benz(B) EIC 121/29-5-62	Do.	32.08	16.04	1.00	49.12	
		Sept. '62	Piston Assembly (cast iron) B/EIC 313/26-9-62.	Do.	24.88	12.44	1.00	38.32	
		Jan. '62	K. type/153 mm	Do.	157.78	78.89	1.00	237.67	

**B. PISTONS.**

1. Collector of Customs, Bombay.	Italy	17-5-62	Asso 103 E	Set of 4	20.00	10.00	0.25	30.25	With rings and locks.
	Do.	26-6-62	Asso ABE and 103 E	Do.	20.00	10.00	0.25	30.25	Do.
	Do.	21-7-62	Asso 103 E	Do.	20.00	10.00	0.25	30.25	Do.
	Do.	25-7-62	Asso	Do.	13.33	6.67	0.25	20.25	With locks only.
	Do.	31-10-62	Do.	Do.	13.10	6.55	0.25	19.90	Do.
	Do.	17-11-62	Asso 103	Do.	20.00	10.00	0.25	30.25	With rings and locks.
	Do.	21-12-62	Do.	Do.	20.00	10.00	0.25	30.25	Do.

1	2	3	4	5	6	7	8	9	10	11
1.	Collector of Customs, Bombay (contd.)	Italy	4-1-63	Asso 103	Set of 4	Rs. 20.00	Rs. 10.00	Rs. 0.25	Rs. 30.25	Without pins, but with rings, and circlips.
		Do	10-1-63	Asso	Do.	20.00	10.00	0.25	30.25	With rings and locks.
2.	T. V. Sundram Iyengar & Sons Pvt. Ltd., Madurai.	W. Ger- many	11-9-62	'Mahle' 020 o/s, Each and 040 o/s 3.7 1/16" bore.	Do.	14.24	7.12	0.52	21.88	
		Do.	Do.	'Mahle'—020 o/s, Each 030 o/s and 040 o/s 3-1/4".	Do.	13.84	6.92	0.52	21.28	
C. PISTON RINGS :										
1.	Collector of Customs, Cochin	U.K.	July '62	Specialoid — P6 Std. 3.5" (B/E). ID.31 dt. 2-8-62)	Per set	15.01	7.51	1.00	23.52	
2.	Collector of Customs, Madras	Do.	4-11-62	Below 153 mm		20.18	10.09	0.10	30.37	
3.	Collector of Customs, Calcutta	Do.	Sep. '62	Std. size 030 (P6)		20.33	10.17	1.12	31.12	
4.	Madras Auto Service (P) Ltd.	Do.	28-6-62	B.1803 Std. size P6		21.26	10.63	1.13	33.02	
Dodge										
1.	Collector of Customs, Calcutta	U.S.A.	March '62	SP 7332—3-7/16"	Per unit	20.91	10.46	0.63	32.00	
		Do.	Do.	7621—3-7/16"	Do.	14.02	7.01	0.15	21.18	

## Others

1. Collector of Customs, Calcutta .	U.S.A., March '62	SP 7400 Chevrolet 3½".	Per unit	14.02	7.01	0.15	21.18	
	Do.	SP 7605 Chevrolet 3½".	Do.	14.02	7.01	0.15	21.18	
	Do.	SP 7530 Studeba- ker 3-5/16".	Do.	14.02	7.01	0.15	21.18	
	Do.	SP 7393 Studeba- ker 3".	Do.	14.02	7.01	0.15	21.18	
	Do.	SP 7604 Studeba- ker 3-3/8".	Do.	18.05	9.03	0.54	27.62	
	Do.	SP 7619 Studeba- ker 3-9/16".	Do.	18.05	9.03	0.54	27.62	
	Do.	SP 7539 Int 3-5/16"	Do.	17.63	8.82	0.53	26.98	
	Do.	SP 7361 G. Mc 3-25/32".	Do.	17.63	8.82	0.53	26.98	
2. Collector of Customs, Cochin	U.K., Jan. '63	Kelerin J. type	Do.	4.50	2.25	0.10	6.85	Piston ring, top chrome (alloy piston).
	Do.	Do.	Do.	1.72	0.86	0.10	2.68	Piston ring (plain).





सत्यमेव जयते